KWB

JOHN SEVIER STEAM PLANT

BORROW AREA RECLAMATION

DNE SOIL SCHEDULE 6.7

O. P. Thornton, Project Manager, Fossil Engineering Project, W3 D224 C-K

R. C. Weir, Acting Chief Nuclear Engineer, W10 C126 C-K

JOHN SEVIER STEAM PLANT - BORROW AREA RECLAMATION - DNE SOIL SCHEDULE 6.7

The soil investigation outlined in the attached request dated February 3, 1987 (B65 870204 001), has been completed. The purpose of the investigation was to determine engineering properties of foundation soils and to estimate usable borrow soils. The field work was performed between February 11 and February 23, 1987. A total of 513 lin ft was drilled and sampled at 39 locations. Among them, 31 split-spoon, 4 undisturbed samples, and 4 auger borings were completed. Due to access difficulties for drilling equipment, 4 split-spoon borings were not drilled.

Site Conditions

The borrow area explored is located south of ash disposal area 2 and in a narrow strip between the railroad and State Highway 70. As shown in the attached generalized cross sections, bedrock was encountered at elevations ranging from 1082 to 1125 and sloped gently from east to west. At borings SS-1 and -12 an existing layer of dry stacked fly ash approximately 25-ft thick was located. Generally, the weathered shales overlaid by about 5 to 15 ft of residual or alluvial clay extended to the depth explored. After degradation caused by sampling and processing, the weathered shales were typically classified as sands and gravels. Rock outcrop was present at the original proposed boring SS-14 where drilling was abandoned.

The overburden soils excluding fly ash were classified as a lean clay and a clayey sand and their thickness ranged from 5.3 to 29.0 ft. Generally, consistencies were medium to dense except at borings SS-5, -15, and -28 where very loose layers were found. A boring location plan is attached.

Groundwater

Water level readings taken 24 hours after drilling showed the water table was located at or near the surface at most of the locations. Heavy precipitations during the period of sampling may have partially contributed to the high groundwater table. The groundwater table of each boring is shown in the attached boring soil profiles.

O. P. Thornton

JOHN SEVIER STEAM PLANT - BORROW AREA RECLAMATION - DNE SOIL SCHEDULE 6.7

Borrow Soils

The borrow area investigated covers approximately 22 acres and usable thickness ranges from 4 to 18 ft. The total yardage of borrow soils is estimated to be 174,000 yd^3 in which 52,000 yd^3 is above the water table and 122,000 yd^3 is below the water table. The volume computations are based on an average usable area and depth and correcting for an assumed shrinkage of 25 percent.

Laboratory Testing

Each split-spoon sample was visually classified and tested for moisture content (ASTM D 2216). A representative sample of each soil type underwent index testing including grain-size analysis (ASTM D 422) and Atterberg limits determination (ASTM D 4318). Index tests in addition to unit weight (SLP-2) and specific gravity (ASTM D 854) tests were performed on each undisturbed sample. Triaxial Q (ASTM D 2850) and R (SLP-7) and permeability (SLP-3) tests were performed on four representative undisturbed samples.

The average moisture content of undisturbed soils was 21.5 percent. The soils were near saturation because of the high groundwater table. Under Q-test conditions, friction angles ranged from 1.2 to 10.1 degrees with cohesions of 0.16 to 0.57 tsf. Under R-test conditions, apparent friction angles varied from 16.1 to 20.9 degrees with cohesions of 0.12 to 0.51 tsf. Permeabilities ranged from 0.6×10^{-7} to 7.6×10^{-7} cm/sec.

For borrow soils, two soil classes were selected for compaction testing; one was classified as a lean clay, CL, and the other was a clayey sand, SC. The clayey sand contained 13 percent gravel thus a 6-in. dia mold was used for compaction. Optimum moisture contents and maximum densities of soil classes I and II were 15.5 and 11.3 percent and 111.0 and 124.6 pcf respectively. For soil specimens remolded at 90 percent of maximum density and at 3 percent dry of optimum moisture content, friction angles and cohesions of soil classes I and II were 3.6 and 8.6 degrees and 6.48 and 0.18 tsf, respectively, for Q-test conditions; and 15.9 and 16.8 degrees and 0.06 and zero tsf, respectively, for R-test conditions. Coefficients of permeability were 7.5×10^{-8} cm/sec for soil class I and 2.6×10^{-6} cm/sec for soil class II. Test results are summarized in the attachments.

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O. P. Thornton

JOHN SEVIER STEAM PLANT - BORROW AREA RECLAMATION - DNE SOIL SCHEDULE 6.7

Summary

The borrow area investigated consists of random alluvial clay and residual soils derived from weathered shales with medium to hard consistencies. The estimated total yardage of borrow soils is 174,000 yd^3 with approximately 52,000 yd^3 above water table and 122,000 yd^3 below water table. Natural moisture contents are above the optimum moisture contents obtained from the compaction tests. The natural moisture exceeded optimum by an average of 10 and 6 percent for soil classes I and II respectively. The area will present excavation and handling problems due to a high groundwater table and local rock outcrop.

Test results of undisturbed soils indicate a medium to high shear strength and practically impervious drainage characteristics whereas the borrow soils under the conditions tested produced low to medium shear strength and poor to practically impervious drainage characteristics.

R. C. Weir

YCC:MHD
Attachments
cc (Attachments):
RIMS, SL26 C-K
W. H. Childres, SME-K
R. E. Harris, W2 D220 C-K
S. D. Stone, 179 LB-K (2)

This was prepared principally by Yung C. Chung, extension 2771.

A27105.1

TENNESSEE VALLEY AUTHORITY B65 '87 0204 001

SINGLETON MATERIALS ENGINEERING LABORATORY

TEST REQUEST

Test Request Number N/A

TO: W. H. Childres, Supervisor, Singleton Materials Engineering Laboratory, SME-K

FROM: R. E. Harris, W2D22C C-K

DATE: FEB 03 1987

Project John Sevier S.P - Borrow Area Reclamation

Account See Attachment Date Needed See Attachment

1. Type and size of material: See Attachment
2. Test evaluation requested: See Attachment
3. Test material to following requirements: See Attachment
4. Reports:

Test report to indicate acceptance or rejection Yes ✓ No

Submit report to: See Attachment

R. E. Harris

RIMS, SL26 C-K

FEB 06 '87

	Note	Noted
WHC	1	2/10
JFB	2	
PVG		
[illegible]	CC	
Sec	✓	✓

0621R

ATTACHMENT ___ Sheet 1 of 4

SOIL INVESTIGATION REQUEST

SUBJECT John Sevier S.P. - Borrow Area Reclamation

DNE SOIL SCHEDULE NO. 6.7

FIELD EXPLORATION

FOUNDATION OR IN SITU

SPT (D1586*)
No. of borings 35
Sampling interval: Continuous _____, 5' (max.) or each mat'l. change ✓,
or Other _____
Sample to: Top of rock **✓, Elev. _____, or Depth _____

UNDISTURBED SAMPLING (D1587)
No. borings 5, No. UD samples required _____
Sample each rep. soil type ✓, Sample each rep. soil condition ✓,
Est. depth 20 ft, Contact GGEG _____, Other _____

PIEZOMETERS
No. required _____, See sketch _____ for details,
Reading schedule _____
Special instructions _____

BORROW

Volume required (in-place) _____ C.Y., No. holes/acre _____

AUGER BORINGS (D1452) 5 TEST PITS _____
To top of rock** ✓, or Elev. _____, or Depth _____, Other _____

JAR/BAG SAMPLING
Sample frequency _____
Sample each rep. soil type ✓
Other _____

GENERAL

Field classification (D2488): Each sample ✓, Other _____
Borings by: Dry procedures ✓, Drilling mud _____, Other _____
Borehole groundwater readings:
At completion of boring _____, 1 hr. ✓, 24 hr. ✓, Other _____
Special requirements for hole backfill use fine-grained soil
Boring locations shown on attached Drawing
Allowable boring offset from locations shown 5 ft. ±
Survey required ✓ Accuracy required 1 ft Horiz., 0.1 ft Vert.
Other instructions or requirements _____
** top of rock or gravel if gravel is encountered.

*Applicable ASTM test designation or SME special laboratory procedure.

LAB TESTING

FOUNDATION or IN SITU	ASTM or SME Proc.	All Samples	Rep. Sample of Each Soil Type	Other
A. DISTURBED SAMPLES				
Classification	D2487		✓	
Moisture Content	D2216	✓		
Liquid Limit	D4318		✓	
Plastic Limit	D4318		✓	
Particle Size	D422		✓	To D10 ____ or ✓75-M mm
Specific Gravity	D854		✓	
Other				
Unused Sample Storage Requirements - Contact Ken Burnett after the completion of the final report.				
B. UNDISTURBED SAMPLES				
Classification	D2487	✓		
Moisture Content	D2216	✓		
Liquid Limit	D4318	✓		
Plastic Limit	D4318	✓		
Particle Size	D422	✓		To D10 ____ or ✓75-M mm
Specific Gravity	D854	✓		
Unit Weight	SLP1/2	✓		
Permeability				
Fine Grain	SLP3		✓	
Granular	D2434			
Relative Density	D4253/4			
Consolidation	D2435			Natural moisture____, Saturated____, Max. load____TSF, Cr reqd.____ at load ____ TSF
Unconfined Compression	D2166			Degree of Sensitivity, St ____
Unconsolidated-Undrained (Q)	D2850		✓	
Consolidated-Undrained (R)	SLP7		✓	Natural moisture____, Saturated ✓, Pore pressure measurement ✓
Consolidated-Drained (S)				
Triaxial	SLP8			Natural moisture____, Saturated ____
Direct Shear	D3080			Natural moisture____, Submerged ____
Cyclic Triaxial Shear	SLP9			____TSF, Max. no. of cycles____, Initial cyclic stress ratio ____
Resonant Column	D4015			Natural moisture____, Saturated____, ____TSF, Initial stress (H:V) ratio ____
Unused Sample Storage Requirements - Contact Ken Burnett after completion of the final Report				

Other instructions or requirements -

LAB TESTING (Continued)

BORROW SOILS	ASTM or SME Proc.	All Samples	Other
A. JAR SAMPLES			
Classification	D2487		
Moisture Content	D2216		
Liquid Limit	D4318		
Plastic Limit	D4318		
Particle Size	D422		To D10 size _____ or _____ mm
B. SOIL CLASSES (BAG SAMPLES)		Each Soil Class	
Classification	D2487	✓	
Liquid Limit	D4318	✓	
Plastic Limit	D4318	✓	
Particle Size	D422	✓	To D10 size _____ or ✓75 µm ~~mm~~
Specific Gravity	D854	✓	
Moisture-Density (Compaction)			
Standard	D698	✓	Family of compaction control curves ✓
Modified	D1557		Family of compaction control curves _____
Moisture-penetration	SLP5	✓	
Relative Density	D4253/4		Granular soils only
		Each Soil Class	MOLDING CONDITIONS AND SPECIAL INSTRUCTIONS
Consolidation	D2435		_____% Compact, _____% Wet of OMC, _____% Dry of OMC, Max. load _____TSF, Cr reqd _____ at load _____ TSF
Permeability			
Fine Grain	SLP3		a) 90***% Compact, _____% Wet of OMC, b) 95***% a)&(b) 3 % Dry of OMC
Granular	D2434		_____% Relative Density
Unconsolidated-Undrained(Q)	D2850		a) 90***% Compact (a)&(b) 3 % Wet of OMC, b) 95***% (b) _____% Dry of OMC
Consolidated-Undrained (R)	SLP7		a) 90% Compact, _____% Wet of OMC, b) 95%*** (a)&(b) 3 % Dry of OMC, Saturate before shear ✓, Pore pressure measurement ✓
Consolidated-Drained (S)			
Triaxial	SLP8		_____% Compact, _____% Wet of OMC, _____% Dry of OMC, Saturate before shear _____
Direct Shear	D3080		_____% Compact, _____% Wet of OMC, _____% Dry of OMC, Submerge before shear _____
Cyclic Triaxial Shear	SLP9		_____% Compact, _____% Wet of OMC, _____% Dry of OMC, _____TSF, Max. no. cycles _____, Initial cyclic stress ratio _____
Resonant Column	D4015		_____% Compact, _____% Wet of OMC, _____% Dry of OMC, _____TSF, Initial stress (H:V) ratio _____
Unused Sample Storage Requirements			

Other instructions or requirements - *** these tests are to be performed after coordinating with GGEG.

REPORT

Graphic Logs: SPT Borings ✓, Undisturbed Borings ✓, Auger Borings ✓, Indicate Groundwater ✓

Boring Location Plan ✓

Soil Profiles (Geologic Sections) ✓

Tabulation of SPT Sample Test Data ✓

Tabulation of Undisturbed Sample Test Data ✓

Plots of Test Data ✓

Advanced Information Requirements (1) Split-spoon boring logs for GGEG selection of auger borings and undisturbed borings locations.

Final Report: Due Date April 15, 1987

Distribution:

2 Copy(s) to S. D. Stone, 179 LB-K
1 Copy(s) to RIMS, SL 26 C-K
1 Copy(s) to R.E. Harris
___ Copy(s) to

ADMINISTRATIVE

SBA 12-87

Contact Person Ken Burnett Ext. 4311 or 3426

Cat Spli, K 3 305

Estimated Cost 42,400.

Account Number 68D2-544051-20866

GGEG Reviewer Syed B Ahmed Ext. 6905

JOHN SEVIER STEAM PLANT

BORROW AREA RECLAMATION

SUMMARY OF LABORATORY TEST DATA

Elevation	Soil Symbol	Nat. Moist. %	% Sat	Grain-Size Analysis Gravel %	Sand %	Silt %	Clay %	D_{10} mm	Liq Limit %	Plast Index %	Dry Dens pcf	Void Ratio	Triaxial Q Undisturbed ϕ deg	c tsf	Saturated Triaxial R Apparent ϕ deg	c tsf	Effective ϕ deg	c tsf	Coef of Perm K_v cm/sec
Boring US-5, Surface El 1127.75																			
1126.75-1124.65	CL	20.7	92.8	0	39	35	26	--	28	12	104.2	.594	1.2	0.30	16.1	0.51	30.3	0.18	7.6×10^{-7}
Boring US-25, Surface El 1118.78																			
1112.78-1110.88	GC	23.3	86.1	34	28	22	16	--	35	15	97.3	.728							
Boring US-34, Surface El 1140.08																			
1135.08-1132.78	CL	19.6	93.2	1	29	40	30	--	29	17	106.9	.561	8.8	0.16	20.9	0.12	29.4	0.11	0.6×10^{-7}
Boring US-35, Surface El 1142.03																			
1138.53-1136.63	CL	17.8	93.8	0	18	39	43	--	24	10	111.0	.511	7.1	0.39	19.1	0.20	31.2	0.00	2.9×10^{-7}
1136.03-1134.63	CH/CL	26.3	92.5	0	22	32	46	--	51	28	95.4	.769	10.1	0.57	19.5	0.46	27.6	0.21	0.6×10^{-7}

A27099.2

JOHN SEVIER STEAM PLANT

BORROW AREA RECLAMATION

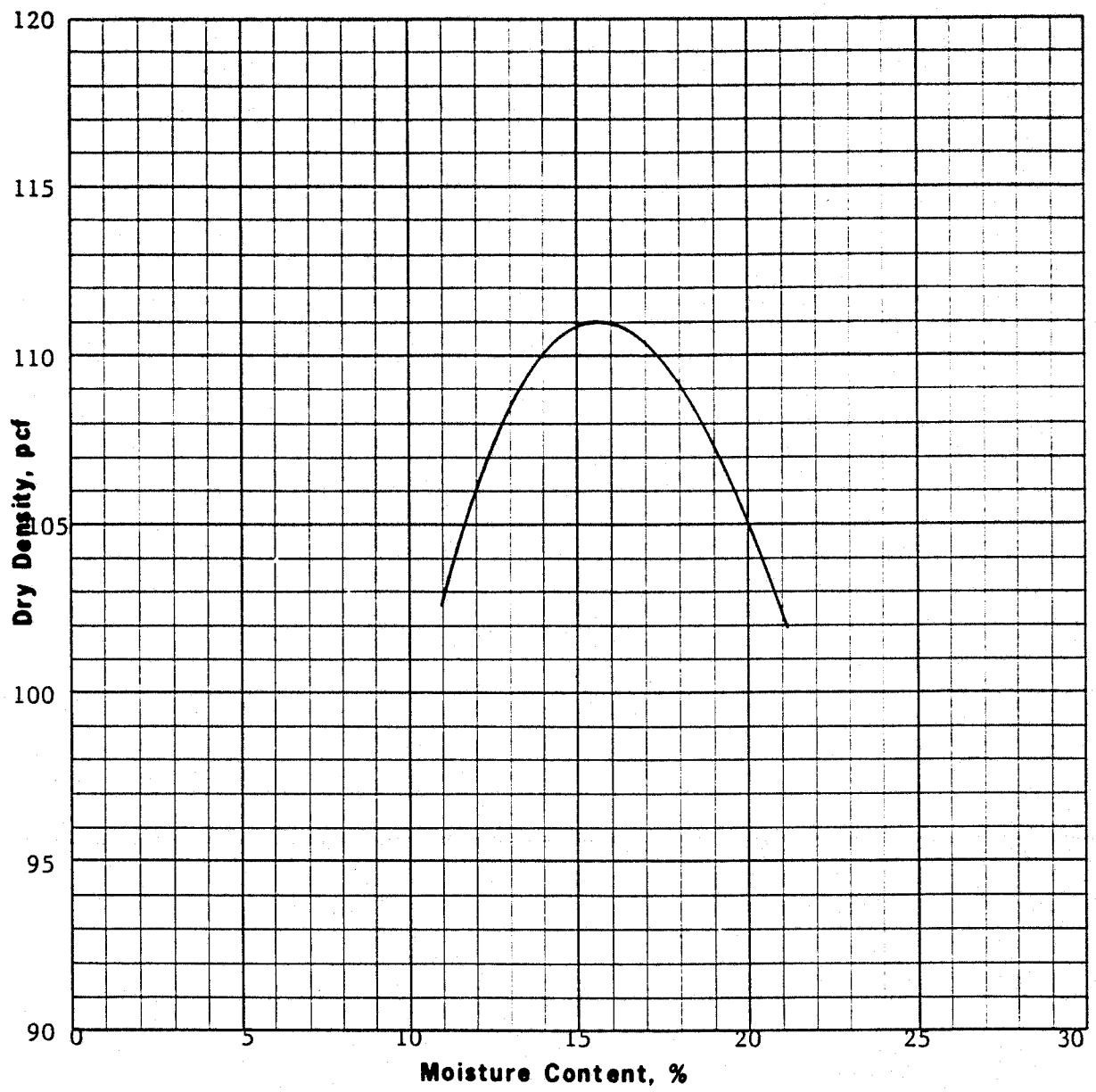
SUMMARY OF LABORATORY TEST DATA

BORROW SOIL CLASSES

Class	I	II
Symbol	CL	SC
Mechanical and Hydrometer Analysis		
Gravel, percent	0	13
Sand, percent	33	40
Silt, percent	22	28
Clay, percent	45	19
Atterberg Limits		
Liquid limit, percent	32	27
Plastic limit, percent	16	17
Plasticity index, percent	16	10
Shrinkage limit, percent	--	--
Standard Proctor Compaction		
Optimum moisture, percent	15.5	11.3
Maximum density, pcf	111.0	124.6
Penetration resistance, psi	--	--
Shear Strength at		
Triaxial Q: ϕ degrees	3.6	9.6
c tsf	0.48	0.18
Triaxial R: ϕ degrees	15.9	16.8
c tsf	0.06	0.00
Coefficient of Permeability, cm/sec	7.5×10^{-8}	2.6×10^{-6}

A27099.1

ATTACHMENT 8
CONST-QCP 5.3



Soil Class	Gravel %	Sand %	Silt %	Clay %	Specific Gravity	LL %	PI %	Optimum Moisture, %	Maximum Density, pcf
I-CL	0	33	22	45	2.70	32	16	15.5	111.0

Plus No. 4 Specific Gravity, S S D	--
Plus No. 4 Absorption, %	--

Remarks:

Project John Sevier Steam Plant

Feature Borrow Area Reclamation

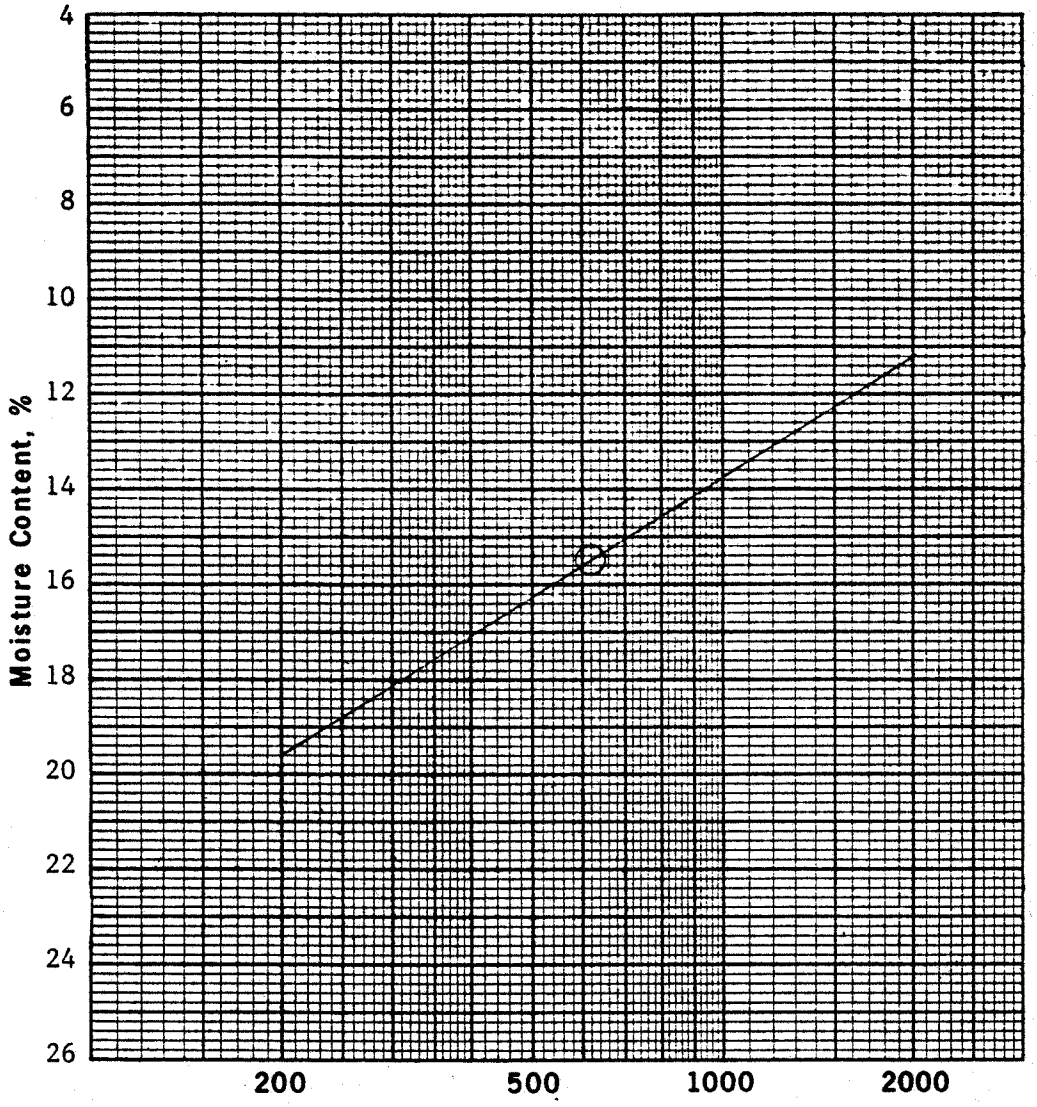
ASTM Designation D 698A

Date Tested March 5, 1987

COMPACTION TEST (FAMILY OF CURVES)

TVA 10201 (CONST-6-77)

Tested by: TAL Reviewed by: CBG



Soil Class	Optimum Moisture, %	Maximum Density, pcf	Penetration Resistance, psi
I-CL	15.5	111.0	620

Remarks:

○ **Denotes Optimum Moisture**

Project John Sevier Steam Plant

Feature Borrow Area Reclamation

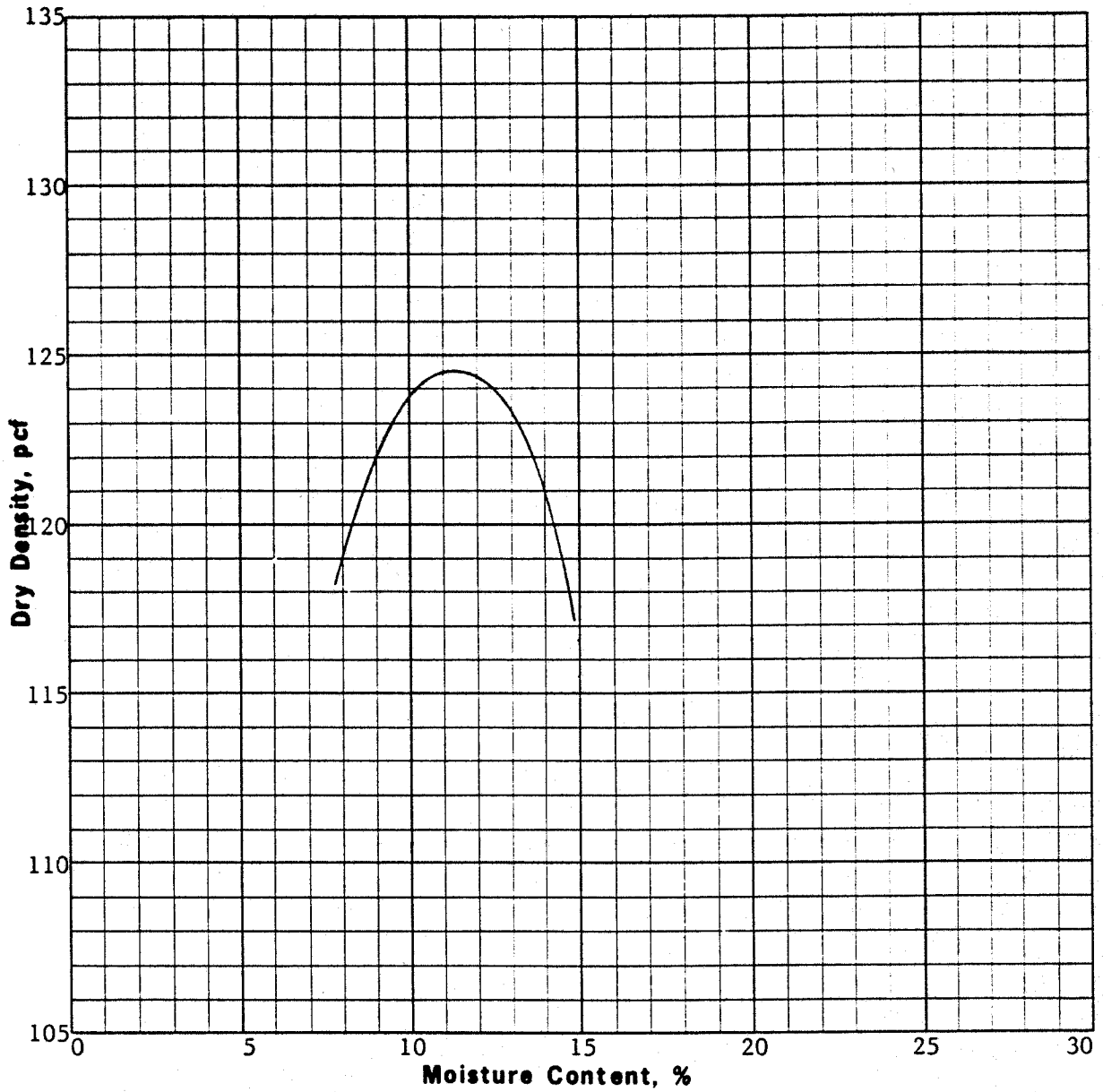
ASTM Designation D 698A

Date Tested March 5, 1987

MOISTURE - PENETRATION TEST

TVA 10200 (CONST-12-76)

Tested by: TAL Reviewed by: CRE



Soil Class	Gravel %	Sand %	Silt %	Clay %	Specific Gravity	LL %	PI %	Optimum Moisture, %	Maximum Density, pcf
II-SC	13	40	28	19	2.74	27	10	11.3	124.6

Plus No. 4 Specific Gravity, S S D	2.55
Plus No. 4 Absorption, %	4.30

Remarks: Used 6-in. dia mold and compacted in three layers. Each layer received 56 blows. For details see ASTM D 698 Method C.

Project John Sevier Steam Plant

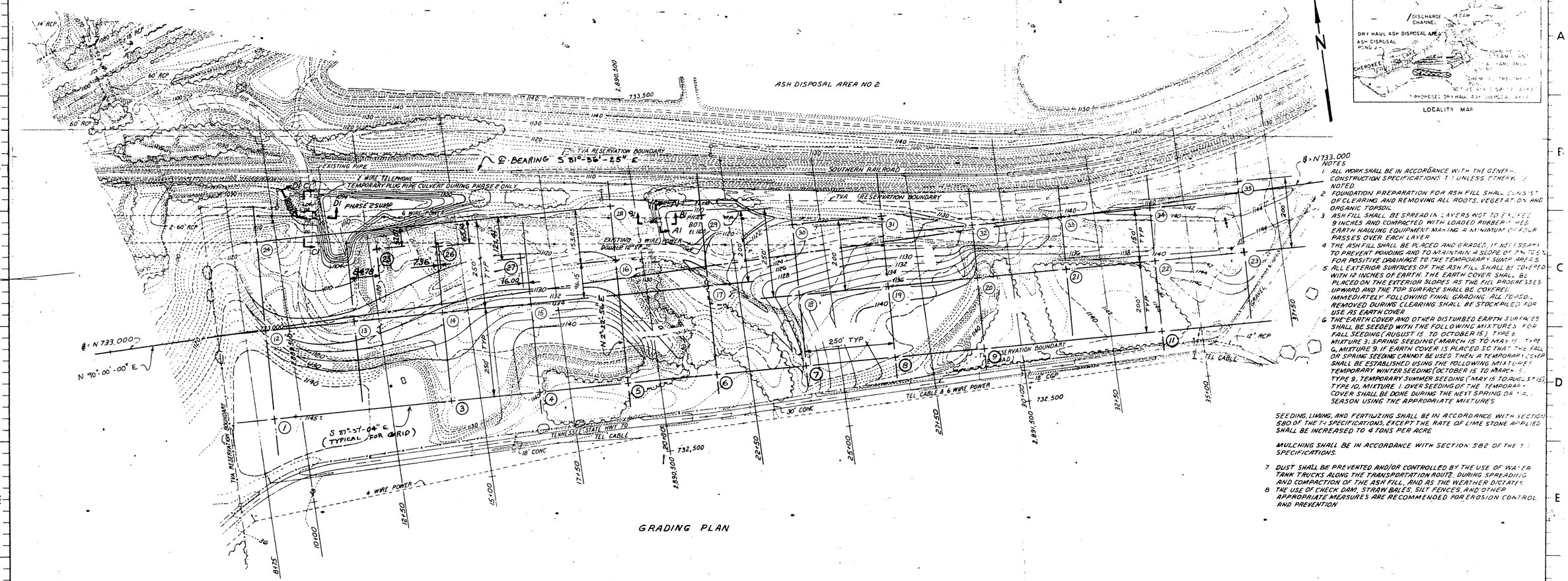
Feature Borrow Area Reclamation

ASTM Designation D 698C

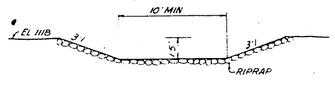
Date Tested March 19, 1987

COMPACTION TEST (FAMILY OF CURVES)

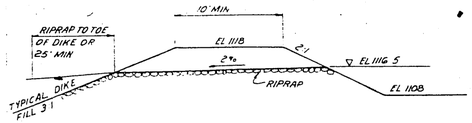
Tested by: TAL Reviewed by: CRF



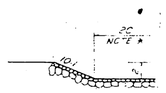
GRADING PLAN



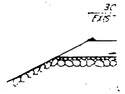
A1-A1
NTS



B1-B1
NTS



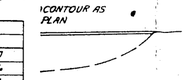
C1-C
NTS



D1-D1
NTS

HOLE	T/G ELEV	COORDINATES NORTH	COORDINATES EAST
1	1139.40	732,748.49	2,889,413.08
2	———	DID NOT DRILL	
3	1185.52	732,727.71	2,889,912.65
4	1132.57	732,717.32	2,890,162.43
5	1127.75	732,706.92	2,890,412.21
6	1131.67	732,696.53	2,890,662.00
7	1123.43	732,686.14	2,890,911.78
8	1120.37	732,675.75	2,891,161.57
9	1132.07	732,665.36	2,891,411.35
10	———	DID NOT DRILL	
11	1142.93	732,644.58	2,891,910.92
12	1138.59	732,998.27	2,889,423.47
13	1116.30	732,987.88	2,889,673.25
14	1117.86	732,977.49	2,889,923.04
15	1113.83	732,967.10	2,890,172.82
16	1117.23	733,052.77	2,890,416.60
17	1118.20	732,946.31	2,890,672.39
18	1130.46	732,885.97	2,890,920.09

HOLE	T/G ELEV	COORDINATES NORTH	COORDINATES EAST
19	1123.33	732,875.58	2,891,169.87
20	1126.64	733,865.19	2,891,419.66
21	1126.55	732,854.80	2,891,669.44
22	1130.64	732,844.40	2,891,919.23
23	1135.07	732,834.01	2,892,169.01
24	1120.53	733,248.05	2,889,433.86
25	1118.78	733,177.11	2,889,765.98
26	1123.47	733,161.86	2,889,938.07
27	1114.24	733,096.24	2,890,162.18
28	1108.32	733,206.49	2,890,432.79
29	1112.82	733,146.14	2,890,680.71
30	1124.68	733,085.79	2,890,928.41
31	1127.89	733,075.40	2,891,178.19
32	1130.73	733,015.06	2,891,425.90
33	1135.22	733,004.67	2,891,675.68
34	1140.08	732,994.28	2,891,925.47
35	1142.03	733,032.83	2,892,177.33



SUMMARY OF QUANTITIES

ITEM NO	DESCRIPTION	QUANTITIES
	ASH FILL	236,100 C.Y.
120	EARTH COVER	32,200 C.Y.
580&582	SEEDING & MULCHING	89,000 S.Y.

INITIAL ISSUE W.O. NO.

COMPANION DRAWINGS 10H420-2 THRU -

NO.	ECN: FCP	DATE	DRWN	CHKD	DSGN	DRWG. APPD	DES.

SCALE 1" = 100' EXCEPT AS NOTED

YARD

BORROW AREA RECLAMATION

JOHN SEVIER STEAM PLANT
TENNESSEE VALLEY AUTHORITY
OFFICE OF ENGINEERING

DESIGN		DISCIPLINE INTERFACE		ENGINEERING APPROVAL
DRAWN G. P. Lowder	SUPERV. W. Allen Hunt		2	
DESIGNED [illegible]	REVIEWED [illegible]	3	4	[illegible]
KNOXVILLE	DATE 3/14/86	41	C	10W420-1 R[illegible]

ISSUED BY [illegible]

PRINT
SIZE
BR DA PROJ AB CF LE ME NE PE NE SE YE BL BF BB BC
PRINTS REQD.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY

SOIL PROFILE LEGEND AND SYMBOLS

Depth 1"=5'	El	SPT (N)	Log*	W	LL	PI	Gr	Description or Test Results
Boring Depth and Scale	Elevation	Blows Per Foot (SS Boring)	Lab Soil Type	Moisture Content	Liquid Limit	Plasticity Index	Soil Group Number	

Legend

Cl, etc — Soil Type (Unified Classification)

Mat'l — Notation of Soil Not Sampled (SS, PAH, HAH Logs)

(Core) Type — Bedrock (Note core if cored)

▽ — Initial Water Table Reading

▽ — 24 h Water Table Reading

Explanation of US Sampling Limits if Applicable

Boring Symbols

SS - 2-in. od Split Spoon Boring

SPT - Standard Penetration Test Blows Per Foot With 2-in. Split Spoon

CPT - Cone Penetration Test

US - Undisturbed Sample Boring

PAH - Power Auger Hole

HAH - Hand Auger Hole

TP - Test Pit or Trench

V - Vane Shear

P - Piezometer

Under Description or Test Results		
Test	Engineering Test Results	
Q, R, $\bar{R}$, S	Friction Angle (degrees)	Cohesion (tsf)
UC	Unconfined Compressive Strength (tsf)	Sensitivity Ratio
C	Compression Index	Preconsolidation Pressure (tsf)
k	Coefficient of Permeability (cm/sec)	

Example:

Q 12.0 0.62 R 19.6 0.21 S 34.0 0
UC 4.0 2.6 C 0.72 2.0 k 5.6

Soil Test Symbols

Q - Unconsolidated-Undrained Triaxial Compression

R - Consolidated-Undrained Triaxial Compression (Saturated)

$\bar{R}$ - Effective Consolidated-Undrained Triaxial Compression

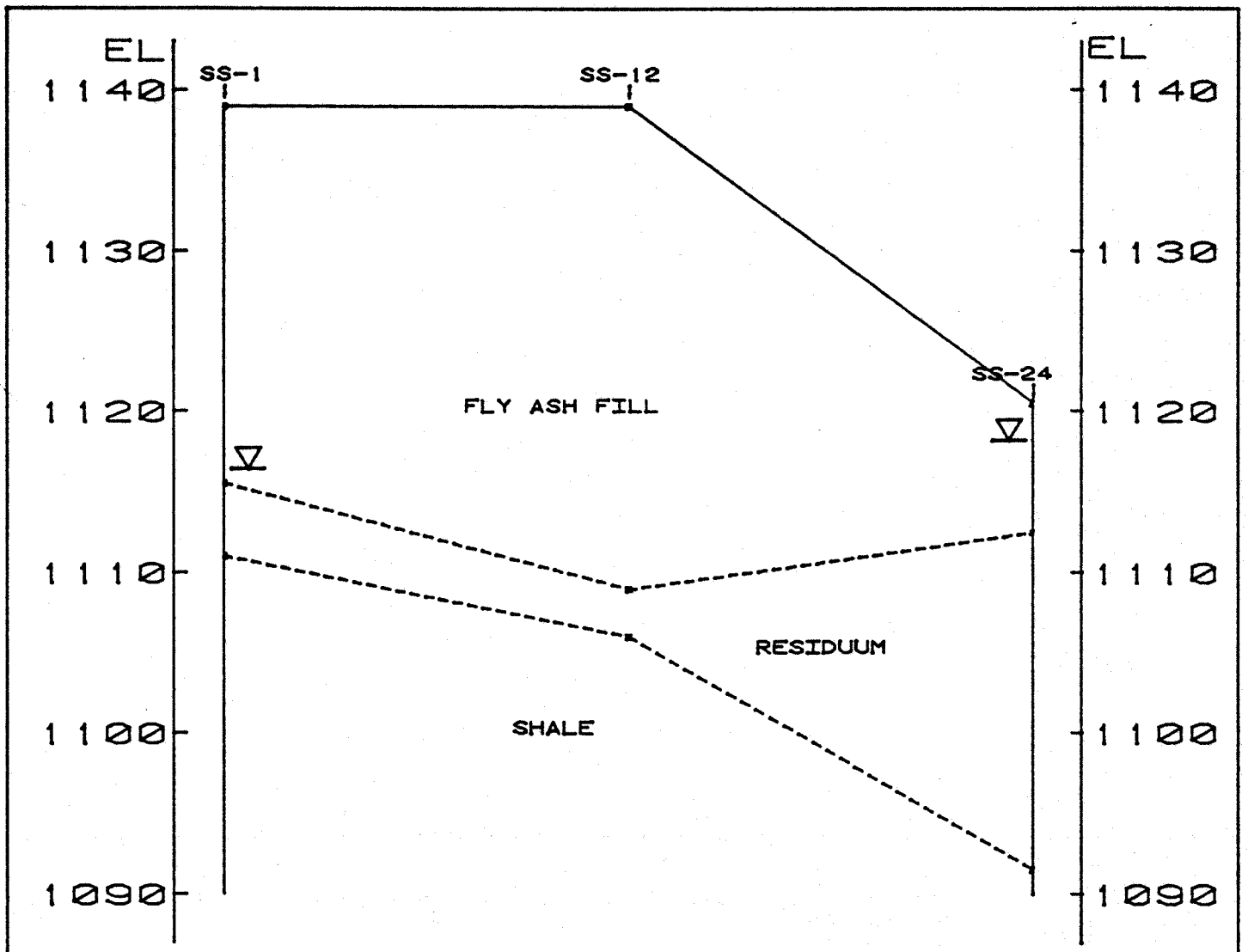
R nat - Consolidated-Undrained Triaxial Compression (Natural Moisture)

S - Consolidated-Drained Direct Shear

UC - Unconfined Compression

C - Consolidation

k - Permeability



SCALE: VERT. 1'' = 10'
HORIZ. 1'' = 100'

LEGEND

▽ 24 h WATERTABLE

NOTE : STRATA CONTINUITY BETWEEN BORINGS ASSUMED

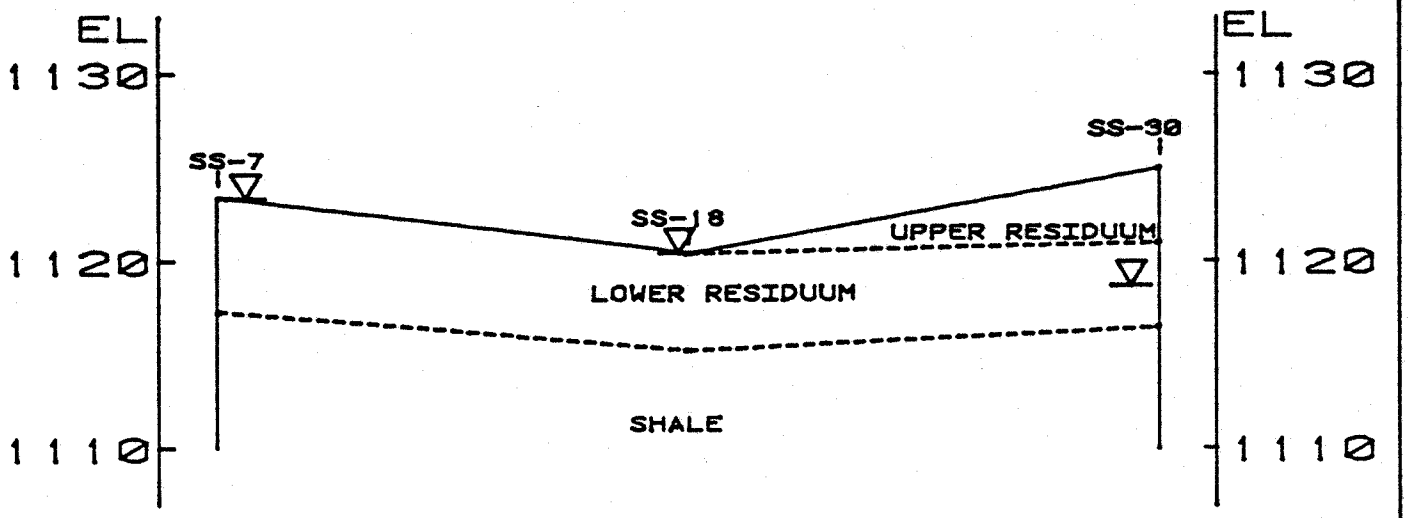
JOHN SEVIER S.P.

BORROW AREA RECLAMATION GENERALIZED CROSS SECTION

TENNESSEE VALLEY AUTHORITY
MATERIALS ENGINEERING LABORATORY

SUBMITTED	RECOMMENDED	APPROVED
Tma CRG	4. C. Chung	C J Bost

KNOXVILLE	041587	41	CE	3	601A2105R0



LEGEND

▽ 24 h WATERTABLE

NOTE : STRATA CONTINUITY BETWEEN BORINGS ASSUMED

SCALE: VERT. 1'' = 10'
HORIZ. 1'' = 100'

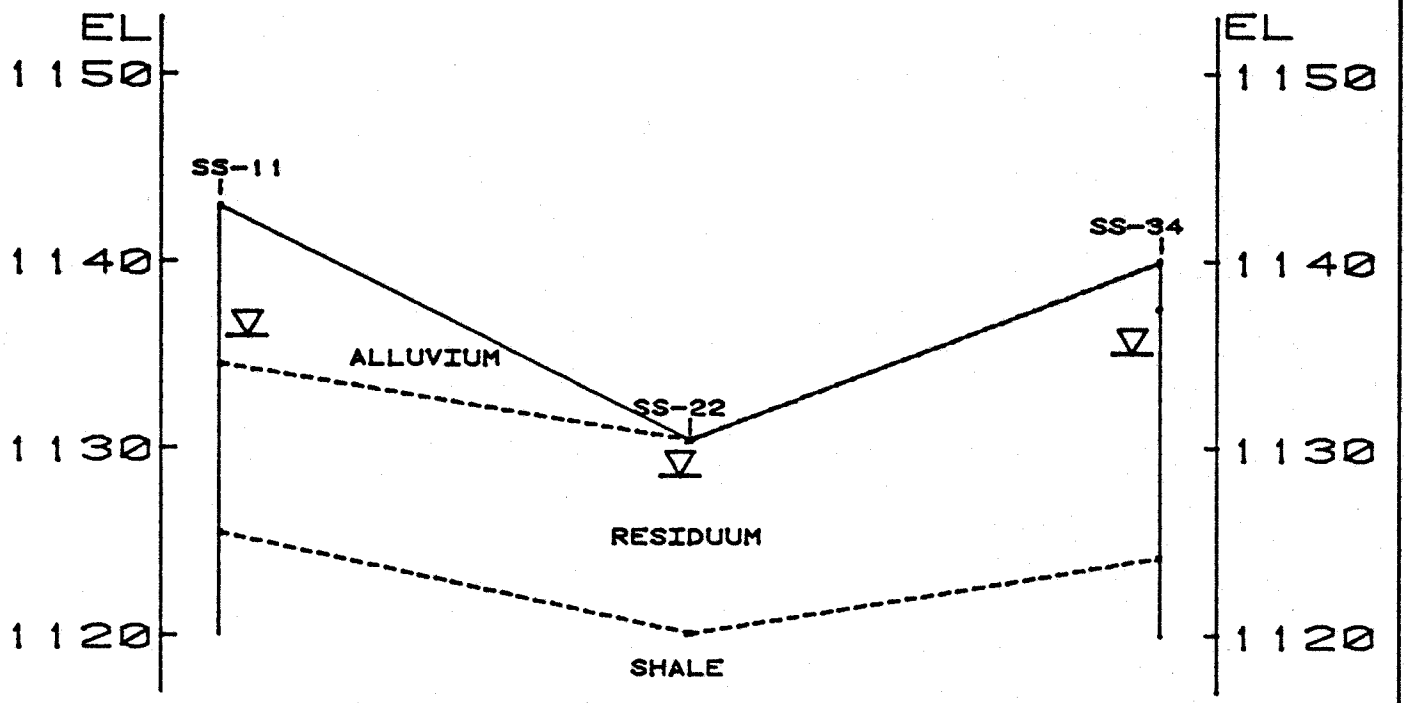
JOHN SEVIER S.P.

BORROW AREA RECLAMATION GENERALIZED CROSS SECTION

TENNESSEE VALLEY AUTHORITY
MATERIALS ENGINEERING LABORATORY

SUBMITTED	RECOMMENDED	APPROVED
[signature]	G. C. Chang	[signature]

KNOXVILLE	041587	41	CE	3	601A2106R0



LEGEND

▽ 24 h WATERTABLE

SCALE: VERT. 1'' = 10'
HORIZ. 1'' = 100'

NOTE : STRATA CONTINUITY BETWEEN BORINGS ASSUMED

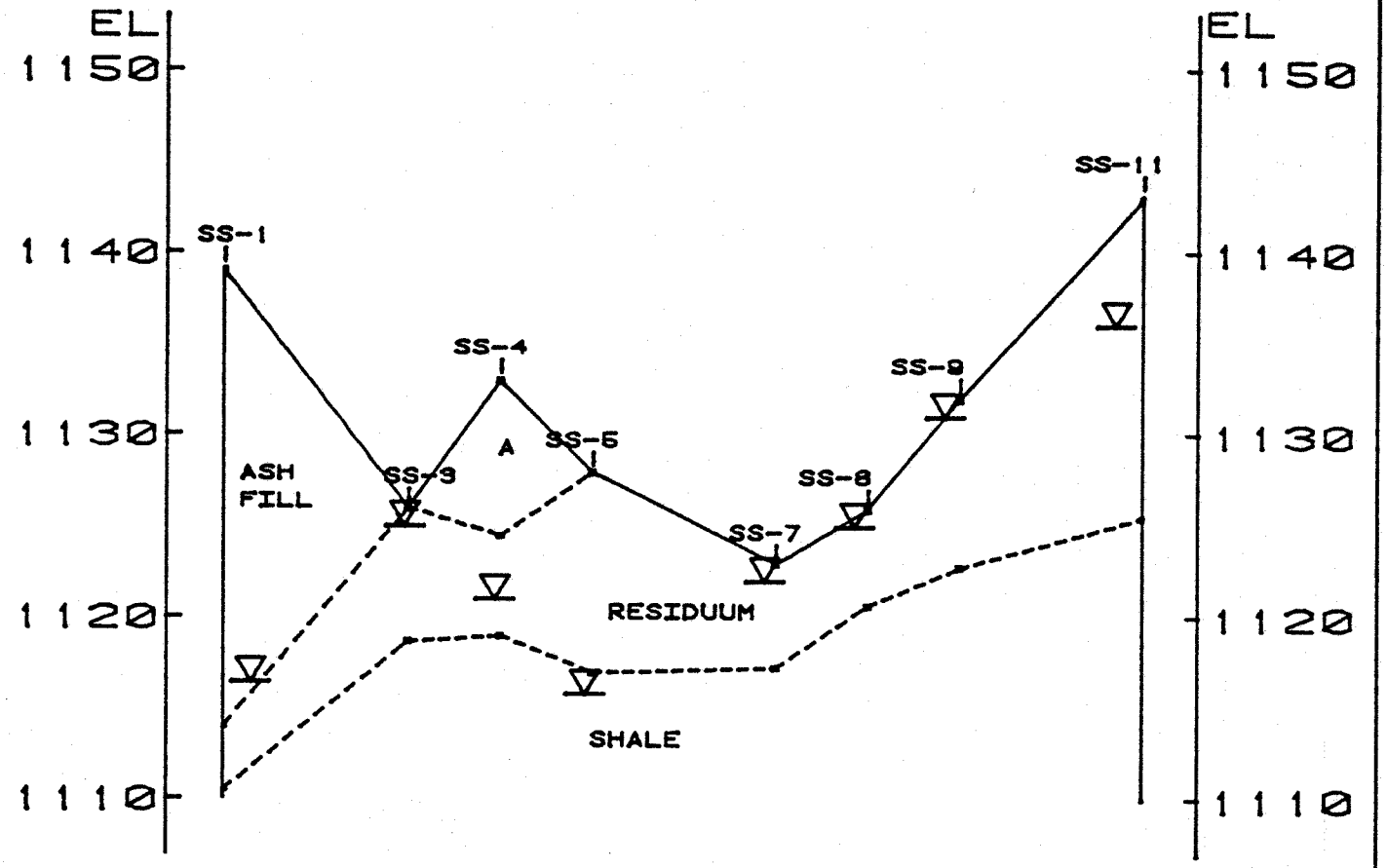
JOHN SEVIER S.P.

BORROW AREA RECLAMATION GENERALIZED CROSS SECTION

TENNESSEE VALLEY AUTHORITY
MATERIALS ENGINEERING LABORATORY

SUBMITTED	RECOMMENDED	APPROVED
Jmm CRG	G. C. Cheng	G W Burt

KNOXVILLE	041587	41	CE	3	601A2107R0



LEGEND

A	ALLUVIUUM
▽	24 h WATERTABLE

NOTE : STRATA CONTINUITY BETWEEN BORINGS ASSUMED

SCALE: VERT. 1'' = 10'
HORIZ. 1'' = 500'

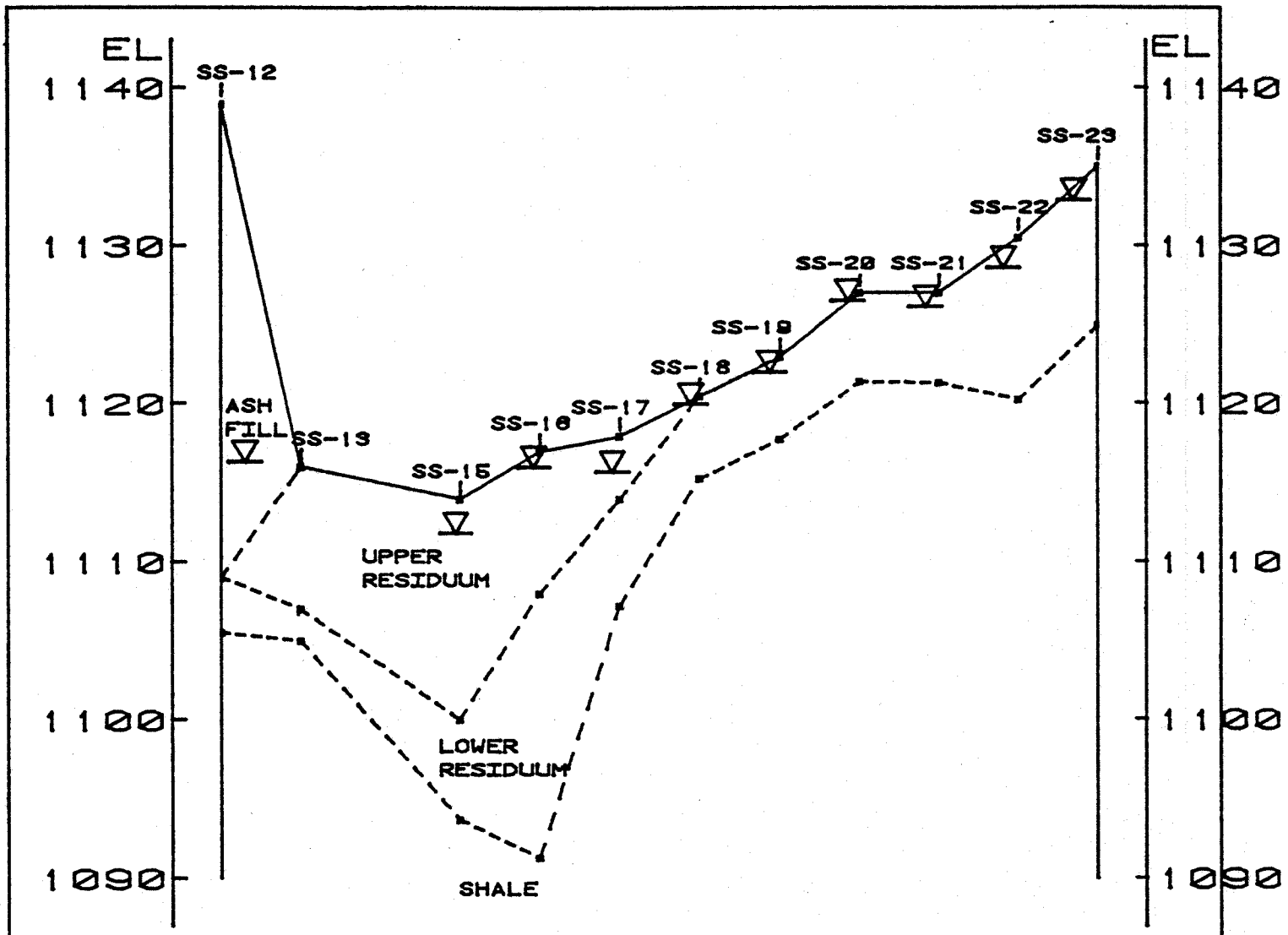
JOHN SEVIER S.P.

BORROW AREA RECLAMATION GENERALIZED CROSS SECTION

TENNESSEE VALLEY AUTHORITY
MATERIALS ENGINEERING LABORATORY

SUBMITTED	RECOMMENDED	APPROVED
Tmm CRG	G. C. Chang	G J Best

KNOXVILLE	041587	41	CE	3	601A2102R0



SCALE: VERT. 1'' = 10'
HORIZ. 1'' = 500'

LEGEND

▽ 24 h WATERTABLE

NOTE : STRATA CONTINUITY BETWEEN BORINGS ASSUMED

JOHN SEVIER S.P.

BORROW AREA RECLAMATION GENERALIZED CROSS SECTION

TENNESSEE VALLEY AUTHORITY
MATERIALS ENGINEERING LABORATORY

SUBMITTED	RECOMMENDED	APPROVED
Tenn CRG	G C Cheung	C J Best

KNOXVILLE	041587	41	CE	3	601A2103R0

Structure	Abbreviation	Consistency	Abbreviation
Blocky	blky	Dense	dns
Fissured	fis	Firm	f
Homogeneous	homo	Hard	hd
Laminated	lam	Loose	lse
Saprolitic	sapr	Soft	s
Shaly	shly	Stiff	stf
Slickensided	slsid	Very stiff	v stf
Stratified	strat		

Origin

Alluvial	all
Colluvial	coll
Loess	lss
Residual	resd

General Modifiers

Alternating	altng	Roots	rts
Angle	∠	Rough	rou
Augering	augg	Slow	sl
Bottom Ash	ba	Small	sm
Coal	col	Spoil	sp
Contaminated	cont	Terraced	ter
Dip	dp	Thick	thk
Disturbed	dstrb	Thin	thn
Debris	dbr	Trace	tr
Discontinued	Disc	Variable	var
Drilling mud	mud	Vegetation	veg
Drive	dr	Vertical	vert
Dust	dst	Weathered	wth
Elevation	el	With	w/
Feet	ft	Wood	wd
Fill	fl		
Fiber	fbr		
Fly Ash	fa		
High/highly	h		
Horizontal	hor		
Hydraulic	hyd		
Inch	in		
Inclusion	inc		
Incomplete Recovery	IR		
Interface	infa		
Low	L		
Material	matl		
Medium	Med		
Original	orig		
Partings	prtgs		
Plastic	plstc		
River	rvr		

FLA

SINGLETON MATERIALS ENGINEERING LABORATORY

FIELD LOG ABBREVIATIONS

Typical Name	Abbreviation
Sandy gravel	sd Gv
Silty gravel	si Gv
Clayey gravel	cl Gv
Sand	Sd
Silty sand	si Sd
Clayey sand	cl Sd
Sandy silt	sd Si
Clayey silt	cl Si
Fat silt	ft Si
Sandy clay	sd Cl
Silty clay	si Cl
Riprap	RR
Medium clay	md Cl
Fat clay	ft Cl
Cobble	Cob
Boulder	Bld
Topsoil	TS

Name Modifiers

Clean	cln
Coarse	crs
Dirty	dty
Fine	fn
Organic	org
Poorly graded	pgd
Well graded	wgd
Degraded	degd

Gravel Shape

Angular	ang
Platy	plgy
Rounded	rd
Subangular	sb ang
Subrounded	sb rd

Lithology and Mineralogy	Abbreviation
Bedrock	br
Chert	cht
Dolomite	dol
Limestone	ls
Manganese	mn
Micaceous	mic
Pyrite	py
Quartz	qtz
Sandstone	ss
Shale	sh
Bentonite	bent
Hematite	hem

Color

Black	blk
Blue	blu
Brown	brn
Cream	crm
Dark	dk
Gray	gy
Green	grn
Light	lt
Maroon	mrn
Mottled	mott
Olive	olv
Pink	pk
Purple	pur
Red	r
Rust	rst
Tan	tn
White	wht
Yellow	yel

Moisture

Dry	d
Moist	mst
Very moist	v mst
Wet	w

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (UNDISTURBED)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: US-5 STATION: RANGE: SURFACE EL: 1128.0
DATE DRILLED: 2/19/87 TO PREPARED BY: MHD CHECKED BY: CBE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
			CL	20.7	28	12		FN SD CL TR SS GV, YEL BRN, MST, S, RESD
								Q 1.2 0.30 Kv 7.6 X 10^6
	1125							~~R 16.1 0.51 R 30.3 0.18~~
5								REFUSAL.
	1120							
10								
	1115							
15								
	1110							
20								
	1105							
25								
	1100							
30								
	1095							
35								
1''=5'		* Lab. Classif.						

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (UNDISTURBED)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: US-16 STATION: RANGE: SURFACE EL: 1117.0
DATE DRILLED: 2/20/87 TO PREPARED BY: MHD CHECKED BY: [illegible]

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
	1115							
5								NO RECOVERY
	1110							
10								
	1105							
15								NO RECOVERY
	1100							DISCONTINUED.
20								
	1095							
25								
	1090							
30								
	1085							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (UNDISTURBED)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: US-25 STATION: RANGE: SURFACE EL: 1118.78
DATE DRILLED: 2/20/87 TO PREPARED BY: MHD CHECKED BY: CRE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
5	1115.08							
			O	23.3	35	15		SI CL GV, GY BRN, W, F, FL
10	1110.08							DISCONTINUED.
15	1105.08							
20	1100.08							
25	1095.08							
30	1090.08							
35	1085.08							
1''=5'								

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (UNDISTURBED)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: US-34 STATION: RANGE: SURFACE EL: 1140.08
DATE DRILLED: 2/20/87 TO PREPARED BY: MHD CHECKED BY: CEE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
	1140.08							
5	1135.08		CL	19.6	29	17		LAM 50% FT CL; 50% FN SD CL, GY-R BRN, MST, ALL Q 8.8 0.16 Kv 0.6x10^7 R 20.9 0.12 $\bar{R}$ 29.4 0.11
10	1130.08							DISCONTINUED.
15	1125.08							
20	1120.08							
25	1115.08							
30	1110.08							
35	1105.08							

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (UNDISTURBED)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: US-35 STATION: RANGE: SURFACE EL: 1142.03
DATE DRILLED: 2/23/87 TO PREPARED BY: MHD CHECKED BY: CEL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
	1140.03							
5			CL	17.8	24	10		SI CL, R BRN, V MST, ALL Q 7.1 0.39 Kv 2.9x10^7 R 19.1 0.20 R 31.2 0.00
	1135.03		CL/CH	26.3	51	28		FN SD CL, R BRN-GY, MST, ALL Q 10.1 0.57 Kv 0.6x10^7 ~~R 19.5 0.46 R 27.6 0.21~~
10								DISCONTINUED.
	1130.03							
15								
	1125.03							
20								
	1120.03							
25								
	1115.03							
30								
	1110.03							
35								

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (POWER AUGER HOLE)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: PAH-5 STATION: RANGE: SURFACE EL: 1127.75
DATE DRILLED: 2/19/87 TO PREPARED BY: MHD CHECKED BY: CEE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1125	05						
5			CL	19.3	30	14	2	SI CL, BRN, W, RESD
			CL	22.5	31	16	4	SI CL, YEL BRN, MST, RESD
	1120	05						
10			CL	25.5	37	17	3	CL SI, LT BRN, MST, RESD
								REFUSAL.
	1115	05						
15								
	1110	05						
20								
	1105	05						
25								
	1100	05						
30								
	1095	05						
35								
1''=5'			*Lab. Classif.					

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (POWER AUGER HOLE)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: PAH-16 STATION: RANGE: SURFACE EL: 1117.23
DATE DRILLED: 2/20/87 TO PREPARED BY: MHD CHECKED BY: CRE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1115.03		CL	14.4	37	17	3	CL SI, LT BRN, MST, RESD
5								
	1110.03		CL	25.9	30	14	2	FT CL, BRN-GY, MST, RESD
10								
	1105.03		CL	24.0	37	17	3	SI CL, BRN, MST, RESD
15								DISCONTINUED.
	1100.03							
20								
	1095.03							
25								
	1090.03							
30								
	1085.03							
35								

1"=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (POWER AUGER HOLE)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: PAH-25 STATION: RANGE: SURFACE EL: 1118.78
DATE DRILLED: 2/20/87 TO PREPARED BY: MHD CHECKED BY: DEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
5	1115.08		CL	22.0	31	16	4	SI CL, BRN, V MST, FL (TR LG SH GV)
								DISCONTINUED.
10	1110.08							
15	1105.08							
20	1100.08							
25	1095.08							
30	1090.08							
35	1085.08							

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (POWER AUGER HOLE)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: PAH-25A STATION: RANGE: SURFACE EL: 1118.78
DATE DRILLED: 2/23/87 TO PREPARED BY: MHD CHECKED BY: CRE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
5	1115.08		CL		31	16	4	SI CL, GY BRN, V MST, ALL
								DISCONTINUED.
10	1110.08							
15	1105.08							
20	1100.08							
25	1095.08							
30	1090.08							
35	1085.08							

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (POWER AUGER HOLE)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: PAH-34 STATION: RANGE: SURFACE EL: 1140.08
DATE DRILLED: 2/20/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1140.08							
			SW	7.8	27	10	1	GV FN SD (WTH SH), GY, D, ALL
5	1135.08		CL	17.2	30	14	2	SI CL, BRN TN, W, ALL
								DISCONTINUED.
10	1130.08							
15	1125.08							
20	1120.08							
25	1115.08							
30	1110.08							
35	1105.08							

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (POWER AUGER HOLE)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: PAH-35 STATION: RANGE: SURFACE EL: 1142.03
DATE DRILLED: 2/23/87 TO PREPARED BY: MHD CHECKED BY: DEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1140.03		CL	20.3	31	16	4	SI CL, GY BRN, V MST, ALL CTR WTH SH GV)
5								
	1135.03		CL	21.1	31	16	4	SD CL, R BRN, V MST, ALL
10								
	1130.03		CL	19.8	31	16	4	SD CL, R BRN, V MST, ALL
15								DISCONTINUED.
	1125.03							
20								
	1120.03							
25								
	1115.03							
30								
	1110.03							
35								

1"=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-1 STATION: RANGE: SURFACE EL: 1139.4
DATE DRILLED: 2/13/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								FLY ASH
5	1135							
10	1130							
15	1125							
20	1120							
								▼
25	1115	48	CL	19.8	33	11	1	80% CL SI, 20% FLY ASH (WTH SH), GY, MST, FL
		29	CL	25.4	33	11	1	CL SI (WTH SH), GY, MST, RESD
		50+	CL	17.7	33	11	1	WTH SH (DEGD BY DRIVE), MST, RESD
30	1110							BEDROCK.
35	1105							
1''=5'		* Lab. Classif.						

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-3 STATION: RANGE: SURFACE EL: 1126
DATE DRILLED: 2/12/87 TO PREPARED BY: MHD CHECKED BY: CEL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1125	6	SC	36.1	39	15	2	TOPSOIL CL SI W/SH DEGD BY DRIVE, MST, GY, RESD
5	1120	23	SC	30.5	39	15	2	CL SI W/SH DEGD BY DRIVE, MST, W, BRN-GY, RESD
								REFUSAL.
10	1115							
15	1110							
20	1105							
25	1100							
30	1095							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-4 STATION: RANGE: SURFACE EL: 1133.0
DATE DRILLED: 2/12/87 TO PREPARED BY: MHD CHECKED BY: CRE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
		12	ML/CL	20.3	43	16	3	SD SI CL, BRN, MST, ALL
	1130							
5		21	GC	21.1	33	14	4	SD SI CL W/GV, BRN, MST, ALL
	1125							
10		25	ML/CL	21.9	43	16	3	CL SI, BRN, MST, RESD (WTH SH DEGD BY DRIVE)
	1120							
15								REFUSAL
	1115							
20								
	1110							
25								
	1105							
30								
	1100							
35								
1''=5'		* Lab. Classif.						

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-5 STATION: RANGE: SURFACE EL: 1128.0
DATE DRILLED: 2/19/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
	1125	3	CL-ML	19.1	41	16	16	SI CL, BRN, W, RESD
5		16	CL	20.0	37	17	15	70% SI CL, BRN, W; 30% SS (DEGD BY DRIVE), MST, RESD
	1120							
10		50+	SC	18.5	30	10	18	WTH SH, GY, MST, RESD
								▼ — — — — — — — —
	1115							REFUSAL.
15								
	1110							
20								
	1105							
25								
	1100							
30								
	1095							
35								

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-7 STATION: RANGE: SURFACE EL: 1124.0
DATE DRILLED: 2/17/87 TO PREPARED BY: MHD CHECKED BY: CEE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
		50+	CL SM	4.6	28	9	7	TOPSOIL WTH SH DEGDD BY DRIVE, GY, MST, RESD
5	1120	50+	CL SM	5.7	28	9	7	WTH SH DEGDD BY DRIVE, GY, MST, RESD
								REFUSAL.
10	1115							
15	1110							
20	1105							
25	1100							
30	1095							
35	1090							

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-8 STATION: RANGE: SURFACE EL: 1126.0
DATE DRILLED: 2/18/87 TO PREPARED BY: MHD CHECKED BY: CBE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1125	16	CL	25.4	35	16	11	TOPSOIL SI CL, BRN, W, RESD
5		50+	SC	6.2	28	9	7	WTH SH DEGD BY DRIVE, MST, RESD
	1120							REFUSAL.
10	1115							
15	1110							
20	1105							
25	1100							
30	1095							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-9 STATION: RANGE: SURFACE EL: 1132.0
DATE DRILLED: 2/19/87 TO PREPARED BY: MHD CHECKED BY: CBL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
	1130	3						NO RECOVERY
		11	CL	33.1	37	17	15	SD SI CL TR GV, TN BRN, W, RESD
5		49	SC	26.1	38	17	19	CL SI, BRN, W, RESD
	1125	50+	SC	17.5	36	15	17	WTH SH DEGD BY DRIVE, MST, GY, RESD
10								REFUSAL
	1120							
15								
	1115							
20								
	1110							
25								
	1105							
30								
	1100							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-11 STATION: RANGE: SURFACE EL: 1143.0
DATE DRILLED: 2/18/87 TO PREPARED BY: MHD CHECKED BY: CEE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
		4	CL	19.7	37	17	15	SI CL, LT BRN, W, ALL
	1140							
5		28	SC	21.6	38	17	19	SI CL, BRN GY, W, ALL
								▼
	1135							
10		15	SC	23.2	38	17	19	SI CL TR GV, BRN GY, W, RESD
	1130							
15		28	CL/ML	37.8	41	16	16	CL SI TR SH, LT/DK BRN, MST, RESD
		50+	SC	9.1	30	10	18	WTH SH, GY BRN, MST, RESD
	1125							REFUSAL.
20								
	1120							
25								
	1115							
30								
	1110							
35								

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-12 STATION: RANGE: SURFACE EL: 1139.0
DATE DRILLED: 2/13/87 TO PREPARED BY: MHD CHECKED BY: [illegible]

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
5	1135							
10	1130							
15	1125							FLY ASH
20	1120							
25	1115							
30	1110							
		40	U S	21.7	39	15	2	CL SI (WTH SH), BRN GY, MST, FL
35	1105							REFUSAL.

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-13 STATION: RANGE: SURFACE EL: 1116.0
DATE DRILLED: 2/11/87 TO PREPARED BY: MHD CHECKED BY: CRG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1115	15	ML/CL	25.1	43	16	3	CL SI (WTH SH), BRN, MST, RESD
5		13	ML/CL	29.1	43	16	3	CL SI (WTH SH), BRN, MST, RESD
	1110							
		50	SC	10.3	39	15	2	WTH SH
10	1105							REFUSAL.
15	1100							
20	1095							
25	1090							
30	1085							
35								

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-15 STATION: RANGE: SURFACE EL: 1114.0
DATE DRILLED: 2/19/87 TO PREPARED BY: MHD CHECKED BY: CEL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
		7	CL ML	38.6	41	16	16	SI CL, TN BRN, W, RESD
5	1110	3	CL	35.8	37	17	15	SI CL TR GV, BRN, W, RESD
10	1105	7	CL ML	40.9	41	16	16	CL SI: 50% WTH SH, 50% RESD; BRN, MST, RESD
15	1100	11	SC	32.2	36	15	17	CL SI (SH DEGD BY DRIVE), BRN, W, RESD
20	1095	50+	SC	5.8	30	10	18	WTH SH DEGDD BY DRIVE, BRN GY, MST, RESD
								REFUSAL.
25	1090							
30	1085							
35	1080							

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-16 STATION: RANGE: SURFACE EL: 1117.0
DATE DRILLED: 2/12/87 TO PREPARED BY: MHD CHECKED BY: CEL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1115	36	GC	9.5	33	14	4	60% CL SI, BRN, MST, RESD 40% GV CL, BRN, MST, FL
5		16	GC	13.5	33	14	4	70% FN SD SI CL, TR GV; 30% SI CL, GY BRN, MST, RESD
	1110							
10		28	ML/CL	22.9	43	16	3	CL SI (WTH SH), BRN BY, MST, RESD
	1105							
15		2	SC/SM	17.9	41	14	5	IR; WTH SH, BRN, MST, RESD
	1100							
20		21	SC/SM	19.1	41	14	5	GV CL SI (WTH SH DEGD BY DRIVE), DK BRN, MST, RESD
	1095							
25		50+	SC	11.8	39	15	2	WTH SH DEGD BY DRIVE, GY, MST, RESD
	1090							BEDROCK.
30								
	1085							
35								

1"=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-17 STATION: RANGE: SURFACE EL: 1118.0
DATE DRILLED: 2/17/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
		25	CL SS	14.6	30	13	13	SI CL TR GV, MOTT BRN GY, W, RESD
	1115							
5		24	CL SS	17.6	30	13	13	SI CL TR GV, TN BRN, W, RESD
	1110	50+	CL SS	4.7	28	9	7	WTH SH DEGD BY DRIVE, MST, RESD
10								
	1105							RESFUSAL.
15								
	1100							
20								
	1095							
25								
	1090							
30								
	1085							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-18 STATION: RANGE: SURFACE EL: 1120.5
DATE DRILLED: 2/17/87 TO PREPARED BY: MHD CHECKED BY: CEE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1120							TOPSOIL
		41	SS	26.3	42	16	10	SI CL TR SH, BRN GY, MST, RESD
		50+	SS	5.2	28	9	7	WTH SH DEGD BY DRIVE, GY, MST, RESD
5	1115							REFUSAL.
10	1110							
15	1105							
20	1100							
25	1095							
30	1090							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-18 STATION: RANGE: SURFACE EL: 1122.5
DATE DRILLED: 2/17/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1120	49		31.6	42	16	10	70% CL SI, W, BRN 30% WTH SH, MST, GY
5		50+						NO RECOVERY
	1115							REFUSAL.
10								
	1110							
15								
	1105							
20								
	1100							
25								
	1095							
30								
	1090							
35								

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-20 STATION: RANGE: SURFACE EL: 1126.5
DATE DRILLED: 2/18/87 TO PREPARED BY: MHD CHECKED BY: CRG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1125	17	CL	28.1	35	16	11	TOPSOIL SI CL, MOTT BRN GY, W, RESD
5		50+	SC	5.4	28	9	7	WTH SH DEGD BY DRIVE, GY, MST, RESD
	1120							REFUSAL.
10								
	1115							
15								
	1110							
20								
	1105							
25								
	1100							
30								
	1095							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-21 STATION: RANGE: SURFACE EL: 1126.5
DATE DRILLED: 2/18/87 TO PREPARED BY: MHD CHECKED BY: CRE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1125	50+	SC	5.5	30	10	8	WTH SH DEGD BY DRIVE, GY, MST, RESD
5		50+	SC	7.1	28	9	7	WTH SH DEGD BY DRIVE, GY, MST, RESD
	1120							REFUSAL.
10								
	1115							
15								
	1110							
20								
	1105							
25								
	1100							
30								
	1095							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-22 STATION: RANGE: SURFACE EL: 1130.5
DATE DRILLED: 2/18/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1130	41	SM	20.7	NP	NP	12	▼70% SI CL BRN TN, W.; 30% SS DEGD BY DRIVE, RESD
5	1125	23	SC/SM	29.0	42	16	10	CL SI (SH), BRN, MST, RESD
		50+	SC	3.4	30	10	8	WTH SH DEGD BY DRIVE, MST, RESD
10	1120							REFUSAL.
15	1115							
20	1110							
25	1105							
30	1100							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-23 STATION: RANGE: SURFACE EL: 1135.0
DATE DRILLED: 2/18/87 TO PREPARED BY: MHD CHECKED BY: CRE

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1135							
		18	CL	25.0	31	15	14	SI CL, BRN GY, S, RESD
5	1130	14	CL	25.8	31	15	14	SD CL, BRN, S, W, RESD
		50+	CL	20.7	35	16	11	WTH SH DEGDD BY DRIVE, MST, GY, RESD
10	1125							REFUSAL.
15	1120							
20	1115							
25	1110							
30	1105							
35	1100							

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-24 STATION: RANGE: SURFACE EL: 1120.5
DATE DRILLED: 2/13/87 TO PREPARED BY: CHECKED BY: MHD

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1120							FLY ASH ▼
5	1115							
		11	ML/CL	36.9	43	16	3	CL SI, BRN, MST, RESD
10	1110		ML/CL		43	16	3	
		11		29.7				CL SI, BRN, MST, RESD
15	1105							
		11	ML/CL	28.1	43	16	3	CL SI (TR WTH SH), BRN, MST, RESD
20	1100							
25	1095	9	SC/SM	38.6	41	14	5	WTH SH DEGD BY DRIVE, DK BRN, W, RESD
30	1090							REFUSAL.
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-25 STATION: RANGE: SURFACE EL: 1119.0
DATE DRILLED: 2/13/87 TO PREPARED BY: MHD CHECKED BY: [illegible]

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
		10	SC/SM	19.3	41	14	5	TOPSOIL SD CL SI, MST, TN BRN, FL
5	1115	3	CL	19.8	33	15	6	SI CL TR GV, BRN-GY, MST, FL
10	1110	26	ML/CL	23.1	43	16	3	CL SI TR WTH SH, BRN, MST, RESD
15	1105	50+	SC	7.7	33	11	1	WTH SH, RESD REFUSAL.
20	1100							
25	1095							
30	1090							
35	1085							

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-26 STATION: RANGE: SURFACE EL: 1123.5
DATE DRILLED: 2/16/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
		8	SC	19.3	30	13	13	SI CL TR ORG, TN BRN, MST, W, FL
	1120	33	SC/SM	24.3	42	16	10	CL SI (WTH SH), TN BRN, MST, RESD
5								
	1115	26	SC/SM	24.4	42	16	10	CL SI (WTH SH), LT BRN, RESD
10								▼
	1110	50+	SC	5.3	30	10	8	WTH SH DEGD BY DRIVE, MST, RESD
15								
	1105							REFUSAL.
20								
	1100							
25								
	1095							
30								
	1090							
35								
1''=5'		* Lab. Classif.						

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-27 STATION: RANGE: SURFACE EL: 1114.0
DATE DRILLED: 2/16/87 TO PREPARED BY: MHD CHECKED BY: CLG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
		29	CL/SS	26.4	42	16	10	CL SI TR WTH SH, BRN, MST, RESD
5	1110	38	CL/SS	26.8	42	16	10	CL SI (WTH SH), LT BRN, MST, RESD
10	1105	50+	SC	10.2	30	10	8	WTH SH DEGD BY DRIVE, MST, RESD
								REFUSAL.
15	1100							
20	1095							
25	1090							
30	1085							
35	1080							

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-28 STATION: RANGE: SURFACE EL: 1108.5
DATE DRILLED: 2/12/87 TO PREPARED BY: MHD CHECKED BY: CRL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
		6	CL	29.1	33	15	6	IR; SI CL TR VEG, MOTT GY BRN, MST, RESD
	1105							
5		13	ML/CL	22.1	43	16	3	CL SI (WTH SH DEGD BY DRIVE), MST, RESD
	1100							
10		6	SC/SM	30.4	41	14	5	CL SI (WTH SH DEGD BY DRIVE), MST, RESD
	1095							
15		1						NO RECOVERY
		4	SC/SM	48.7	41	14	5	CL SI (WTH SH DEGD BY DRIVE), DK BRN, W, RESD
	1090							
20		11	SC/SM	34.1	41	14	5	CL SI (WTH SH DEGD BY DRIVE), DK BRN, W, RESD
	1085							
25		8	SC/SM	38.1	41	14	5	CL SI (WTH SH DEGD BY DRIVE), W, DK BRN, RESD
								DISCONTINUED.
	1080							
30								
	1075							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-29 STATION: RANGE: SURFACE EL: 1113.0
DATE DRILLED: 2/16/87 TO PREPARED BY: MHD CHECKED BY: CBG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
	1110	8	SM	3.4	NP	NP	12	50% SI CL, BRN, W, ALL 50% SD GV, TN BRN, MST, RESD
5		16	CL SS	23.0	30	11	9	CL SI (SH), BRN, MST, RESD
	1105							
10		50+	CL SS	6.1	30	10	8	WTH SH DEGD BY DRIVE, GY, MST, RESD
	1100							REFUSAL.
15								
	1095							
20								
	1090							
25								
	1085							
30								
	1080							
35								
1''=5'		* Lab. Classif.						

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-30 STATION: RANGE: SURFACE EL: 1125.0
DATE DRILLED: 2/16/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL 1125	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
		5	CL	50.0	35	16	11	SI CL TR TS, BRN GY, W, ALL
5	1120	27	SC	7.1	30	11	9	CL SI (WTH SH), BRN GY, MST, RESD
		50+	SC	5.1	30	10	8	WTH SH DEGD BY DRIVE, MST, RESD
10	1115							REFUSAL.
15	1110							
20	1105							
25	1100							
30	1095							
35	1090							

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-31 STATION: RANGE: SURFACE EL: 1128.0
DATE DRILLED: 2/16/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
	1125	11	SC	8.2	30	11	9	SH DEGD BY DRIVE, GY, MST, RESD
5		7	CL	18.8	35	16	11	SI CL, MOTT BRN GY, MST, RESD
	1120	50+	SC	23.1	30	11	9	SI CL TR SH, BRN GY, MST, RESD
10								REFUSAL.
	1115							
15								
	1110							
20								
	1105							
25								
	1100							
30								
	1095							
35								

1''=5'

*Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-32 STATION: RANGE: SURFACE EL: 1131.0
DATE DRILLED: 2/16/87 TO PREPARED BY: MHD CHECKED BY: CRL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1130							TOPSOIL NO RECOVERY
		15						
		16	SC	14.1	30	13	13	70% SD SI CL, TN BRN, MST 30% GV, RSD
5								
	1125	5	CL	32.5	35	16	11	SI CL, BRN, MST, RESD
		26	CL	32.3	35	16	11	CL SI TR SH, BRN, MST, RESD
10								
	1120							
		50+	SC	4.2	30	10	8	IR; WTH SH, MST, RESD
15								
	1115							REFUSAL
20								
	1110							
25								
	1105							
30								
	1100							
35								

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-33 STATION: RANGE: SURFACE EL: 1135.0
DATE DRILLED: 2/17/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL 1135	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
								TOPSOIL
		27	SC	6.4	30	10	8	LS, SH TR CL SI, MST, RESD
5	1130	8	SC	17.3	30	10	8	SI CL TR GV, BRN GY, W, RESD
		50+	CL	9.9	35	16	11	WTH SH DEGD BY DRIVE, BRN GY, MST, RESD
10	1125							REFUSAL.
15	1120							
20	1115							
25	1110							
30	1105							
35	1100							

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-34 STATION: RANGE: SURFACE EL: 1140.0
DATE DRILLED: 2/17/87 TO PREPARED BY: MHD CHECKED BY: CRE

DEPTH ft.	EL 1140	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
		18	SC	5.2	30	10	8	TOPSOIL WTH SH DEGD, GY BRN, MST, RESD
5	1135	9	CL	8.2	35	16	11	SI CL TR SD, TN GY, MST, RESD
10	1130	16	SC	18.9	30	13	13	SI CL TR GV, TN GY, W, RESDS
15	1125	50+	SC	22.0	30	10	8	WTH SH, BRN GY, MST, RESD
								REFUSAL.
20	1120							
25	1115							
30	1110							
35	1105							

1''=5'

* Lab. Classif.

TENNESSEE VALLEY AUTHORITY

SINGLETON MATERIALS ENGINEERING LABORATORY
SOIL PROFILE (SPLIT SPOON)

PROJECT: JOHN SEVIER S.P. FEATURE: BORROW AREA RECLAMATION
BORING: SS-35 STATION: RANGE: SURFACE EL: 1142.0
DATE DRILLED: 2/17/87 TO PREPARED BY: MHD CHECKED BY: CEG

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	1140	14	SC	12.8	30	11	9	TOPSOIL SI CL TR GV, BRN GY, W, RESD
5		10	CL	18.6	35	16	11	SI CL, BRN, GY, W, RESD
	1135	17	SC	22.0	31	15	14	SI CL, BRN GY, W, RESD
10	1130							▼
		13	SC	30.9	30	11	9	CL SI TR SH, GY, W, RESD
15	1125	50+	SC	28.6	30	11	9	WTH SH DEGD BY DRIVE, GY, MST, RESD
20								REFUSAL.
	1120							
25								
	1115							
30								
	1110							
35								

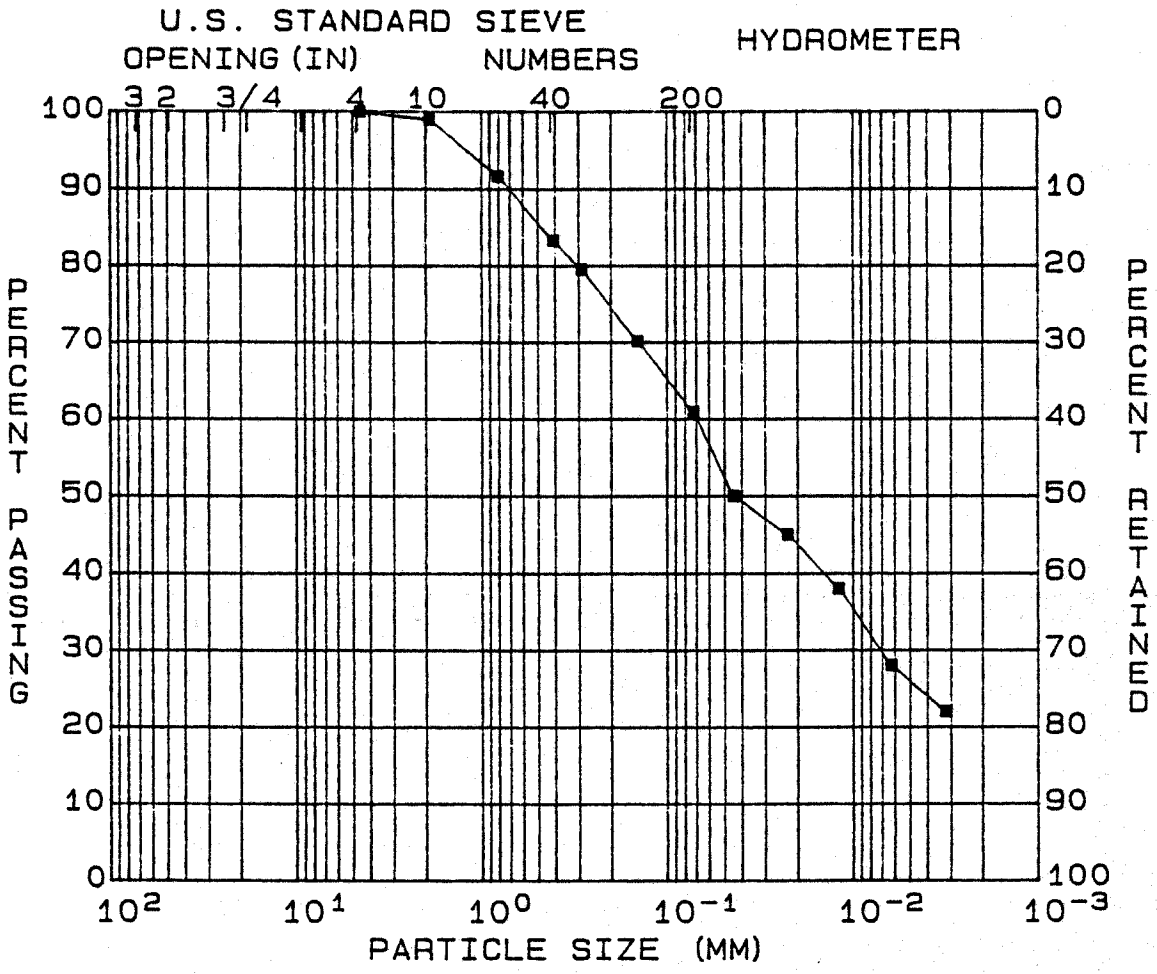
1''=5'

* Lab. Classif.

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: US-5
EL. : 1126.75-1124.65
SAMPLE: 1
DATE : 03-02-87

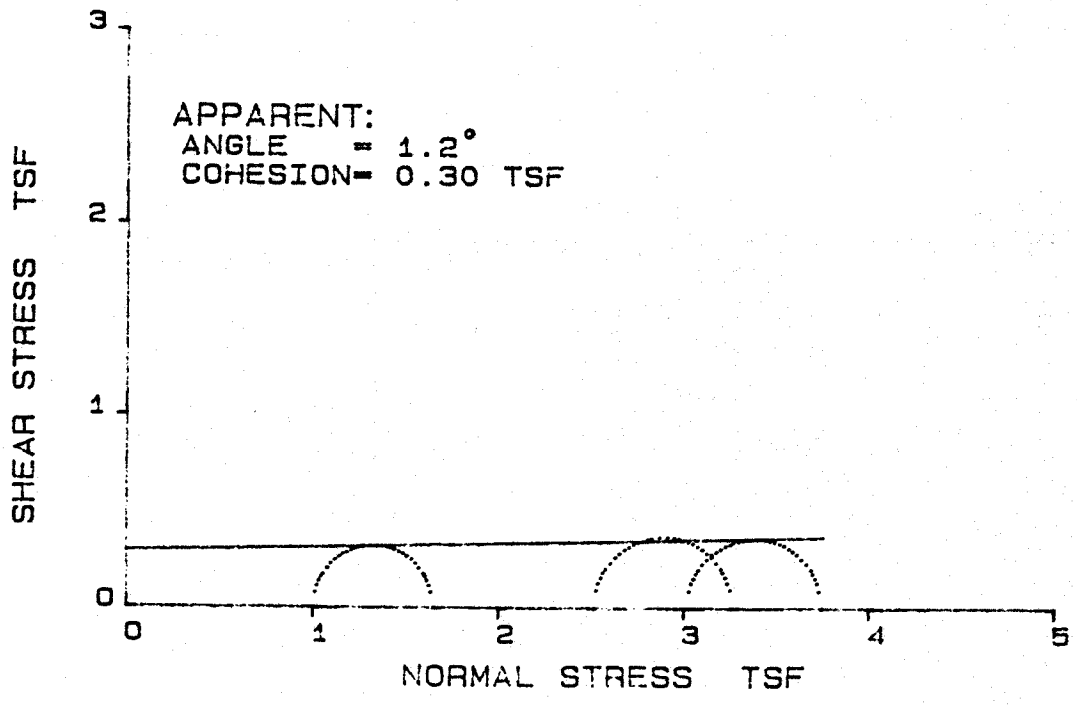


GRAVEL (%)	= 0	D10 (MM)	= --
SAND (%)	= 39	D30 (MM)	= --
SILT (%)	= 35	D60 (MM)	= --
CLAY (%)	= 26	COEF UNIF	= --
SOIL SYMBOL	= CL	L.L. (%)	= 28
MOISTURE (%)	= 20.7	P.I. (%)	= 12
SP. GR.	= 2.66		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

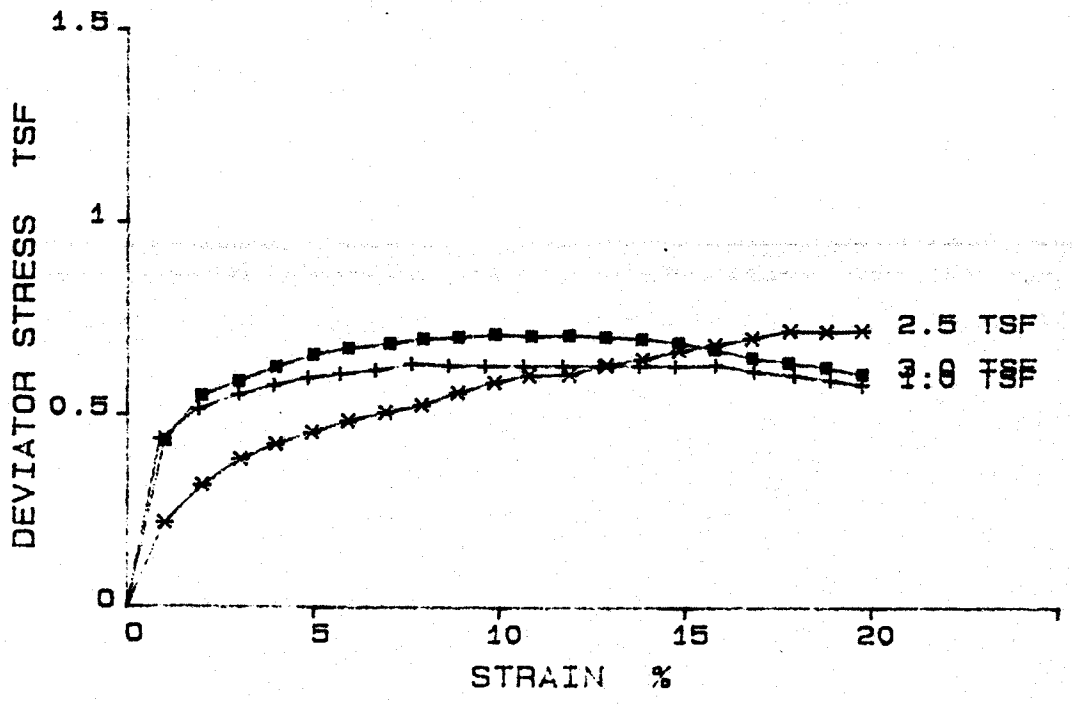
PROJECT:	JOHN SEVIER S.P.	EL.	: 1125.85-1125.45
FEATURE:	BORROW AREA	SAMPLE	: 1
STATION:		PART	: 2
RANGE :		SOIL SYM:	CL
BORING :	US-5	DATE	: 03-17-87



REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

PROJECT:	JOHN SEVIER S.P.	EL.	: 1125.85-1125.45
FEATURE:	BORROW AREA	SAMPLE	: 1
STATION:		PART	: 2
RANGE	:	SOIL SYM:	CL
BORING	: US-5	DATE	: 03-17-87



REMARKS:

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION(Q) TEST

Project: JOHN SEVIER S.P.
Feature: BORROW AREA
Station:
Range :
Boring : US-5

El. : 1125.85-1125.45
Sample: 1
Part : 2

Tested By : ELJ
Computed By: MHD
Checked By : [illegible]
Report Date: 03-17-87

Soil Symbol= CL
Sp. Gr. = 2.66

L.L.(%)= 28
D10(mm)=

P.I.(%) = 12

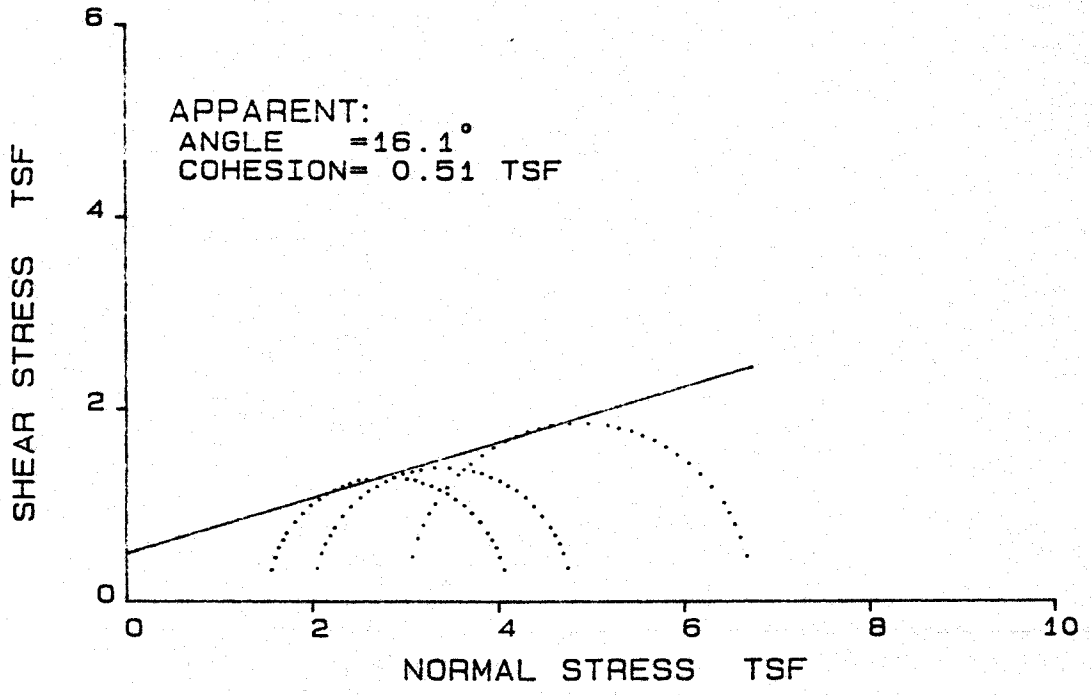
Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	20.2	21.3	21.9	0.0
Dry Density(pcf)	102.7	101.2	102.0	0.0
Void Ratio	0.616	0.641	0.627	0.000
Saturation(%)	87.1	88.2	93.0	0.0
Before Shearing:				
Moisture(%) (after satur.)	--	--	--	--
Saturation(%)	--	--	--	--
Moisture(%) (after cons.)	--	--	--	--
Void Ratio (after cons.)	--	--	--	--
Final Moisture Content(%)	20.0	20.8	21.6	0.0
Minor Principal Stress(tsf)	1.01	2.52	3.02	0.00
Major Principal Stress(tsf)	1.66	3.26	3.75	0.00
Eff. Minor Prin Stress (tsf)	--	--	--	--
Eff. Major Prin Stress (tsf)	--	--	--	--
Time to Failure(min)	16	20	12	0
Rate of Strain(%/min)	1.00	1.00	1.00	0.00
Specimen Height(in.)	3.15	3.15	3.15	0.00
Specimen Dia (in.)	1.40	1.40	1.40	0.00

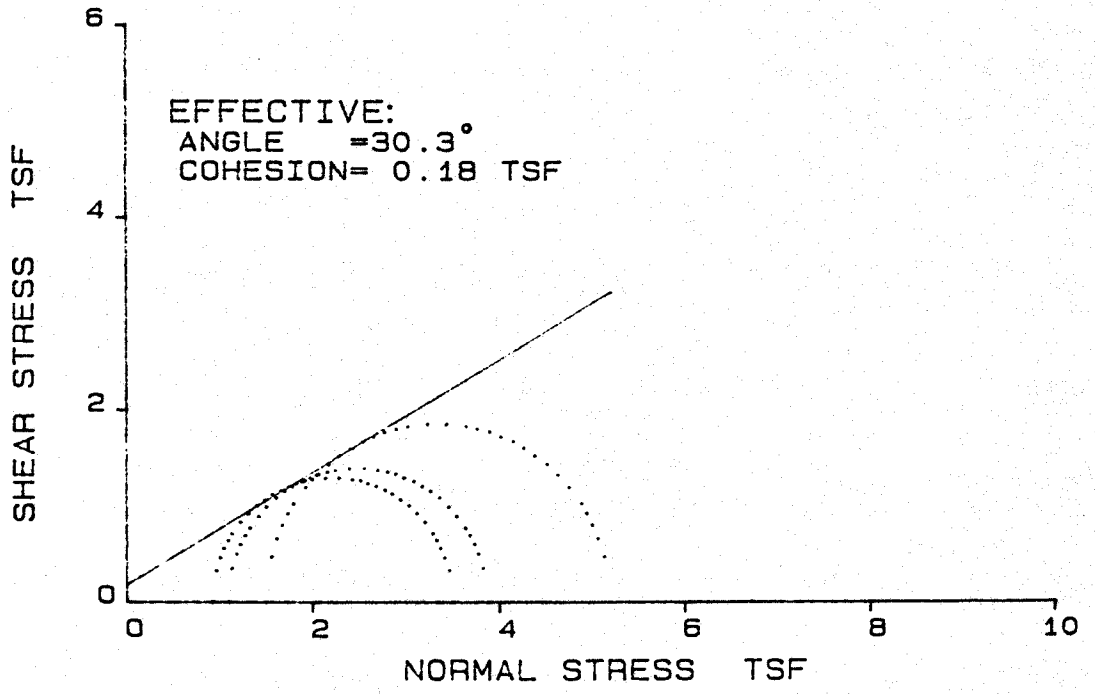
Shear Strength	Max Deviator Stress Deg	Max Deviator Stress c(tsf)	Max Eff Deg	Stress Ratio c(tsf)
Apparent	1.2	0.30		
Effective	--	--		

Remark:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT:	JOHN SEVIER S.P.	EL.	: 1125.45-1125.05
FEATURE:	BORROW AREA	SAMPLE	: 1
STATION:		PART	: 4
RANGE :		SOIL SYM:	CL
BORING :	US-5	DATE	: 3-23-87



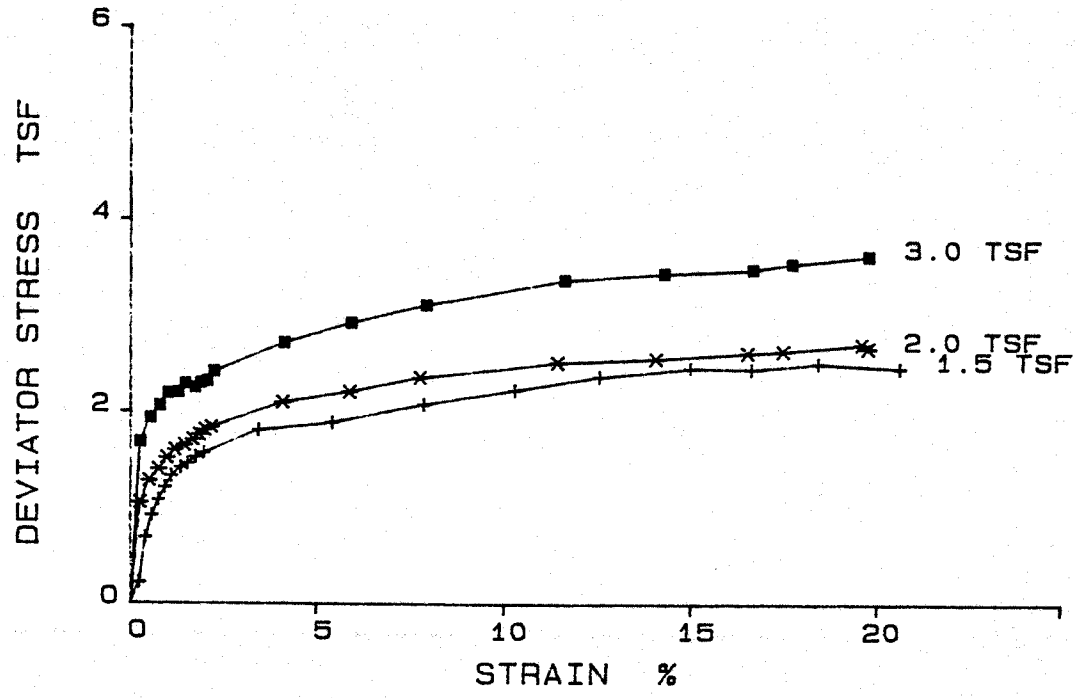


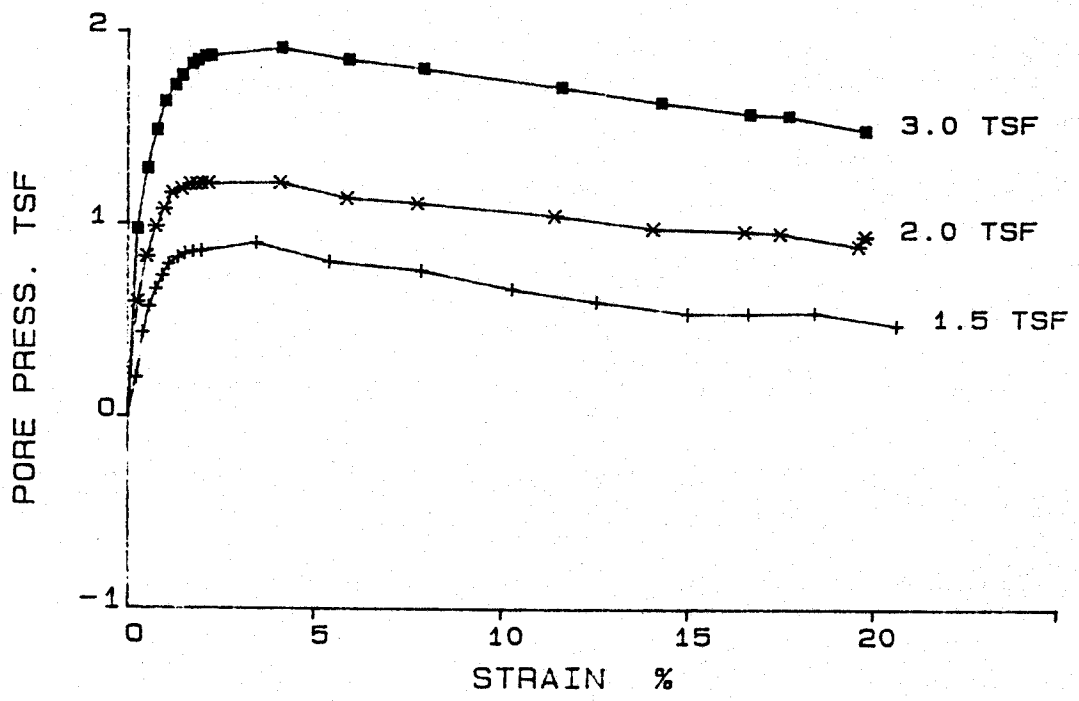
REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW AREA
STATION:
RANGE :
BORING : US-5

EL. : 1125.45-1125.05
SAMPLE : 1
PART : 4
SOIL SYM: CL
DATE : 3-23-87





REMARKS:

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
Consolidated Undrained Triaxial Compression (R) Test

Project: JOHN SEVIER S.P.
Feature: BORROW AREA
Station:
Range :
Boring : US-5

El. : 1125.45-1125.05
Sample: 1
Part : 4

Tested By : TAL
Computed By: MHD
Checked By : CKL
Report Date: 3-23-87

Soil Symbol= CL
Sp. Gr. = 2.66

L.L.(%)= 28
D10(mm)=

P.I.(%) = 12

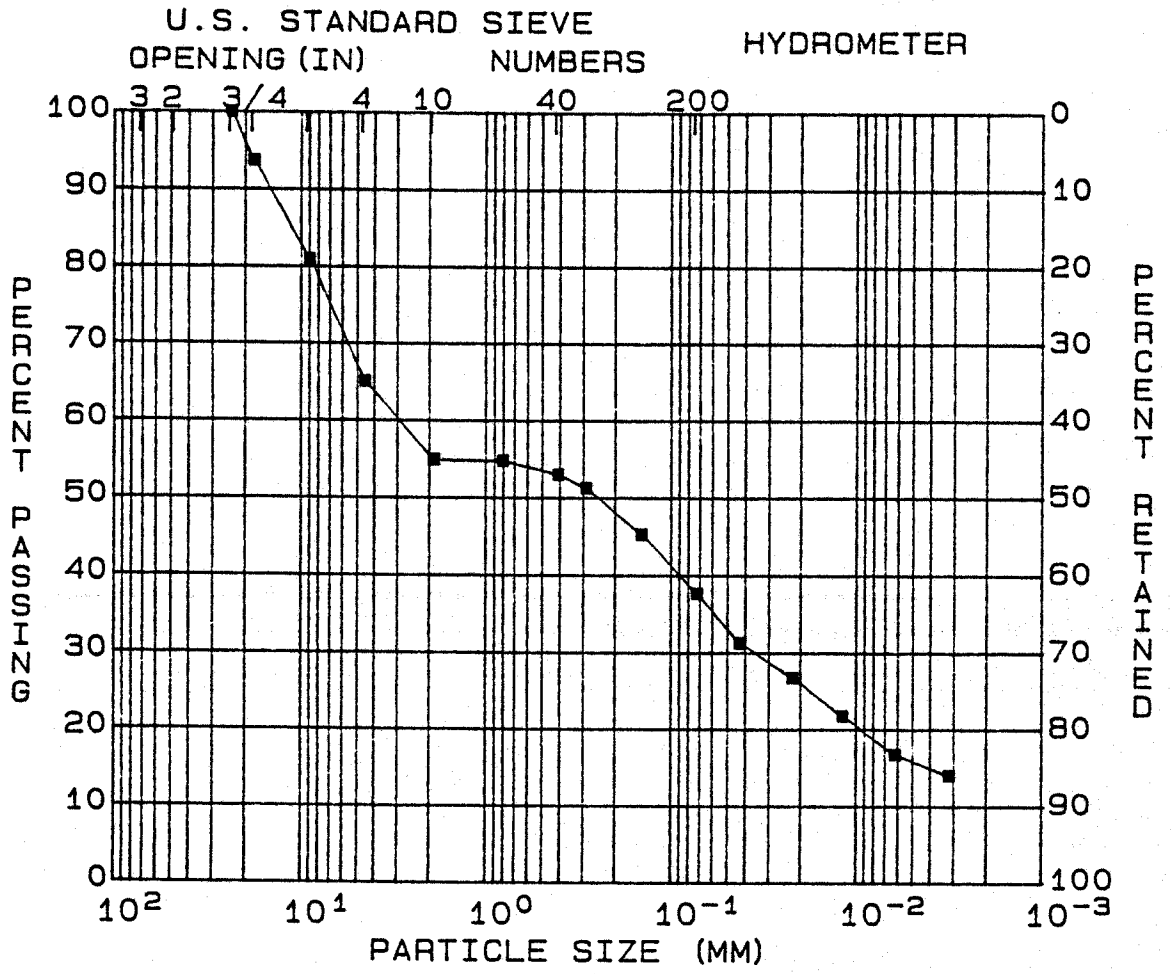
Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	20.5	20.6	21.4	0.0
Dry Density(pcf)	102.9	103.1	102.0	0.0
Void Ratio	0.614	0.610	0.627	0.000
Saturation(%)	88.7	89.6	90.7	0.0
Before Shearing:				
Moisture(%) (after satur.)	23.1	22.9	23.6	0.0
Saturation(%)	100.0	100.0	100.0	0.0
Moisture(%) (after cons.)	19.7	19.4	16.4	0.0
Void Ratio (after cons.)	0.523	0.515	0.435	0.000
Final Moisture Content(%)	19.7	18.9	19.4	0.0
Minor Principal Stress(tsf)	1.51(1.51)	2.02(2.02)	3.02(3.02)	0.00(0.00)
Major Principal Stress(tsf)	4.11(3.37)	4.81(4.16)	6.74(6.46)	0.00(0.00)
Eff. Minor Prin Stress(tsf)	0.93(0.58)	1.09(0.78)	1.50(1.28)	0.00(0.00)
Eff. Major Prin Stress(tsf)	3.52(2.44)	3.89(2.92)	5.21(4.72)	0.00(0.00)
Time to Failure(min)	90	90	90	0
Rate of Strain(%/min)	0.21	0.22	0.22	0.00
Specimen Height(in.)	3.13	3.15	3.15	0.00
Specimen Dia (in.)	1.41	1.40	1.40	0.00

Shear Strength	Max Deviator Stress Deg	Max Deviator Stress c(tsf)	Max Eff Stress Ratio Deg	Max Eff Stress Ratio c(tsf)
Apparent	16.1	0.51	20.6	0.04
Effective	30.3	0.18	32.6	0.12

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: US-25
EL. : 1112.78-1110.88
SAMPLE: 1
DATE : 03-02-87



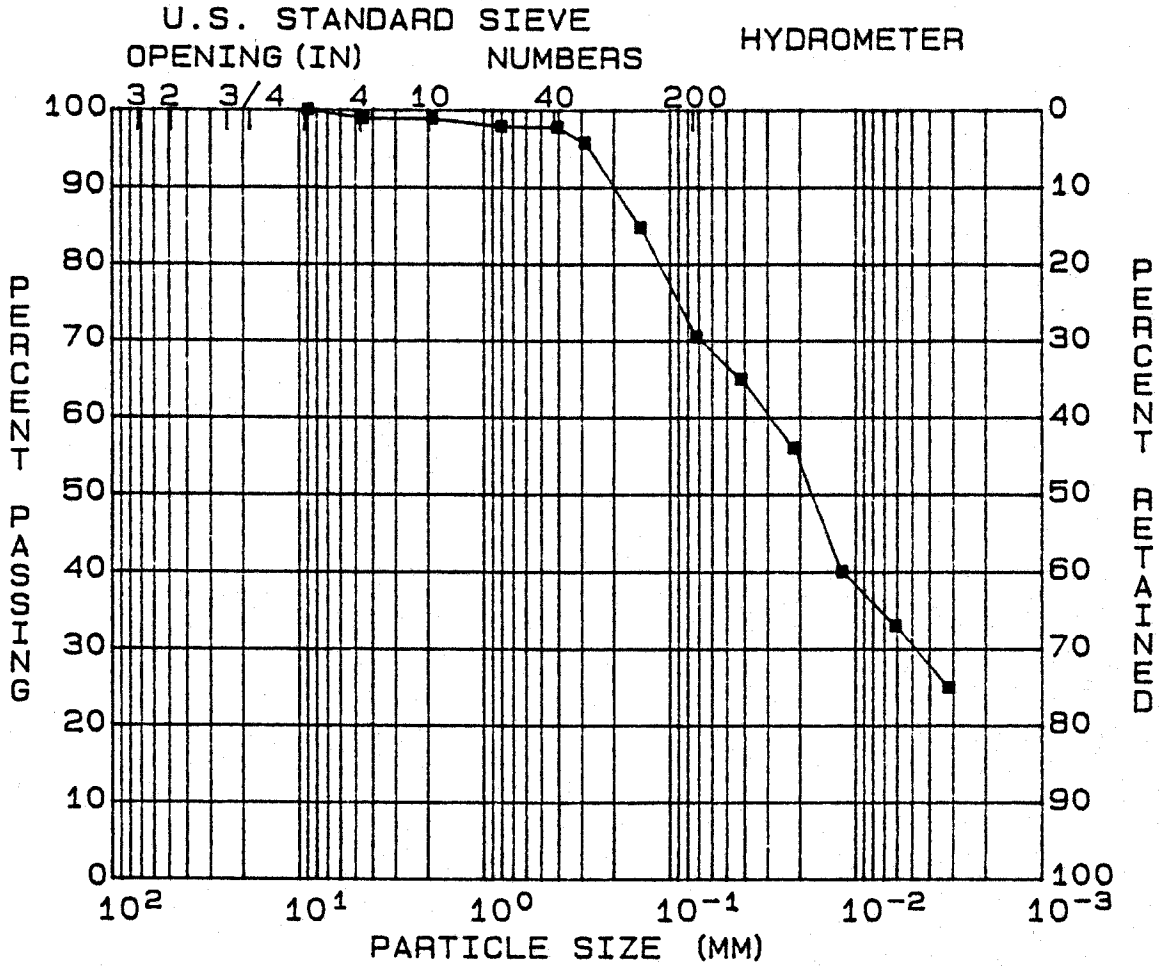
GRAVEL (%)	= 34	D10 (MM)	= 0.0012
SAND (%)	= 28	D30 (MM)	= 0.0351
SILT (%)	= 22	D60 (MM)	= 2.9058
CLAY (%)	= 16	COEF UNIF>	100
SOIL SYMBOL=	GC	L.L. (%)	= 35
MOISTURE (%)	= 23.3	P.I. (%)	= 15
SP. GR.	= 2.70		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: US-34
EL. : 1135.08-1132.78
SAMPLE: 1
DATE : 03-02-87

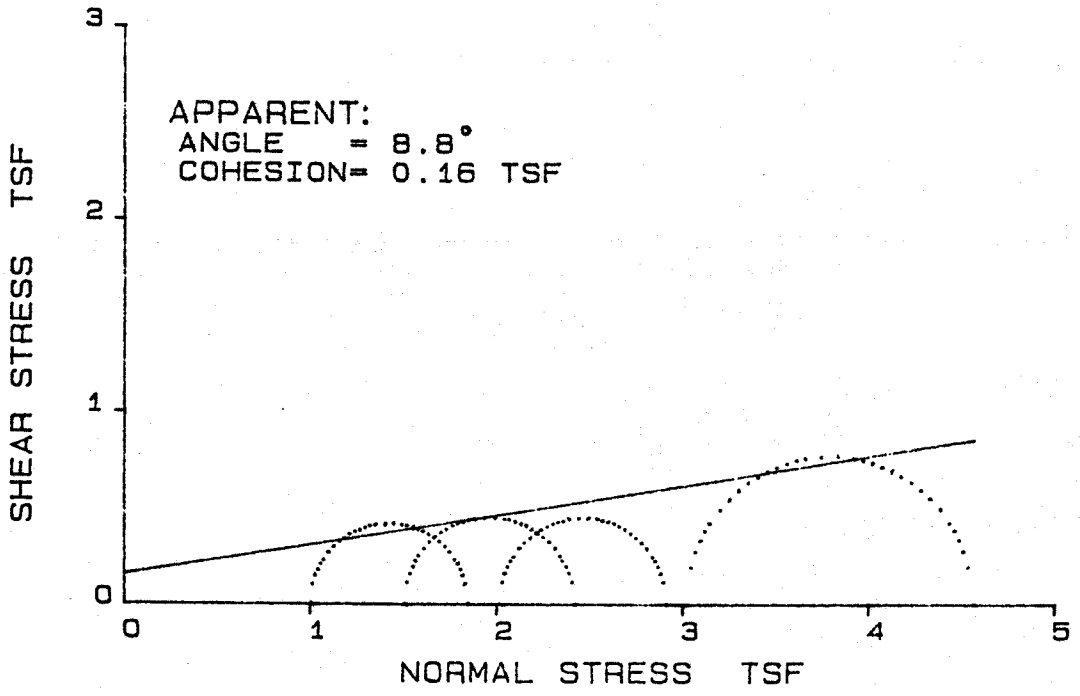


GRAVEL (%)	= 1	D10 (MM)	= --
SAND (%)	= 29	D30 (MM)	= --
SILT (%)	= 40	D60 (MM)	= --
CLAY (%)	= 30	COEF UNIF	= --
SOIL SYMBOL	= CL	L.L. (%)	= 29
MOISTURE (%)	= 19.6	P.I. (%)	= 17
SP. GR.	= 2.67		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

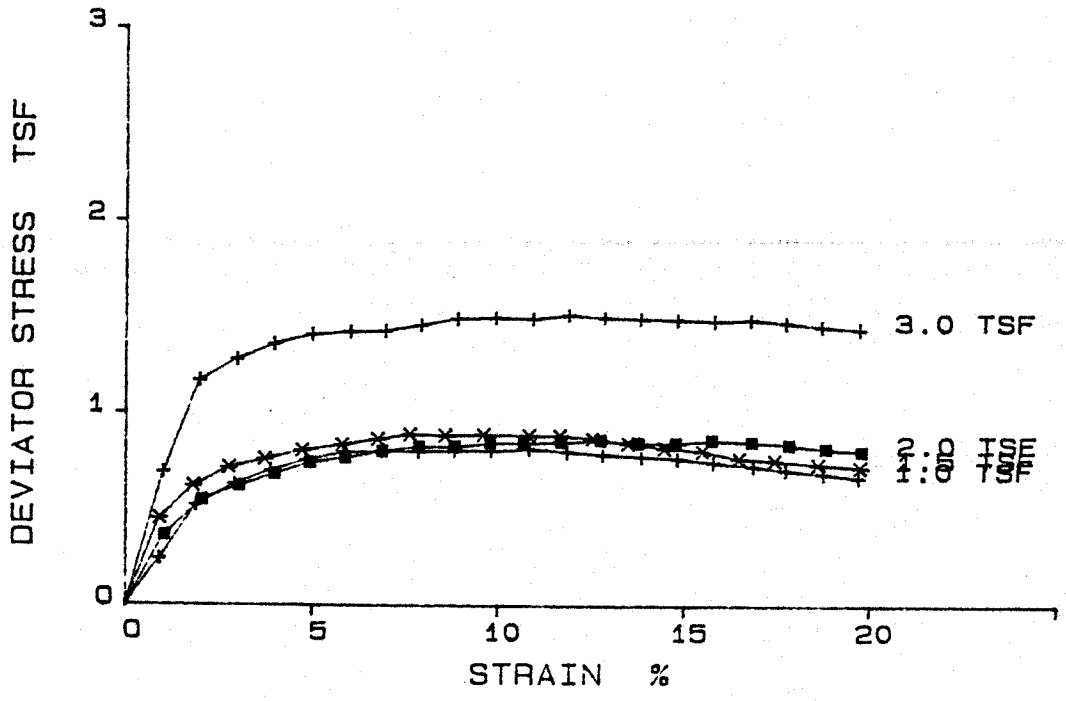
PROJECT:	JOHN SEVIER S.P.	EL.	: 1134.18-1133.68
FEATURE:	BORROW AREA	SAMPLE	: 1
STATION:		PART	: 3
RANGE :		SOIL SYM:	CL
BORING :	US-34	DATE	: 3-23-87



REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

PROJECT:	JOHN SEVIER S.P.	EL.	: 1134.18-1133.68
FEATURE:	BORROW AREA	SAMPLE	: 1
STATION:		PART	: 3
RANGE :		SOIL SYM:	CL
BORING :	US-34	DATE	: 3-23-87



REMARKS:

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
Unconsolidated Undrained Triaxial Compression (Q) Test

Project: JOHN SEVIER S.P.
Feature: BORROW AREA
Station:
Range :
Boring : US-34

El. : 1134.18-1133.68
Sample: 1
Part : 3

Tested By : EJL
Computed By: MHD
Checked By : CEG
Report Date: 3-23-87

Soil Symbol= CL
Sp. Gr. = 2.67

L.L.(%)= 29
D10(mm)= 0

P.I.(%) = 17

Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	19.3	20.5	19.4	19.1
Dry Density(pcf)	106.6	105.9	107.0	108.3
Void Ratio	0.564	0.574	0.558	0.540
Saturation(%)	91.4	95.5	92.7	94.7
Before Shearing:				
Moisture(%) (after satur.)	--	--	--	--
Saturation(%)	--	--	--	--
Moisture(%) (after cons.)	--	--	--	--
Void Ratio (after cons.)	--	--	--	--
Final Moisture Content(%)	19.1	20.2	19.1	18.9
Minor Principal Stress(tsf)	1.01	1.51	2.02	3.02
Major Principal Stress(tsf)	1.86	2.42	2.92	4.57
Eff. Minor Prin Stress (tsf)	--	--	--	--
Eff. Major Prin Stress (tsf)	--	--	--	--
Time to Failure(min)	11	10	16	12
Rate of Strain(%/min)	1.00	0.98	1.00	1.01
Specimen Height(in.)	3.15	3.15	3.15	3.15
Specimen Dia (in.)	1.40	1.40	1.40	1.40

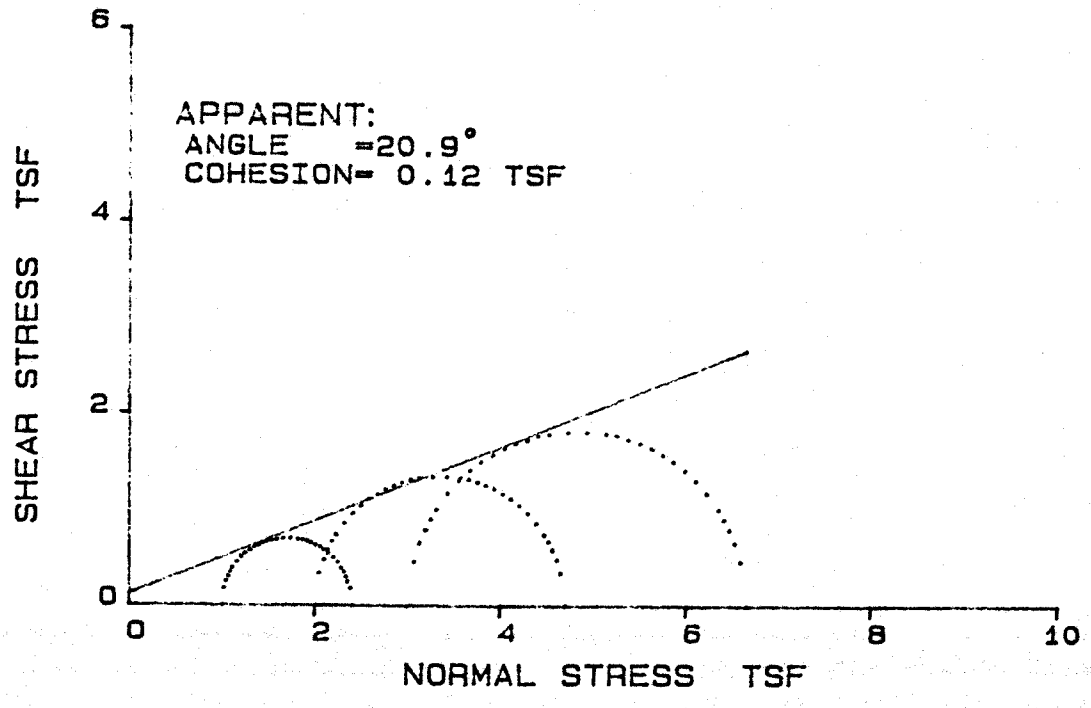
Shear Strength	Max Deviator Stress Deg	Max Deviator Stress c(tsf)	Max Eff Deg	Stress Ratio c(tsf)
Apparent	8.8	0.16		
Effective	--	--		

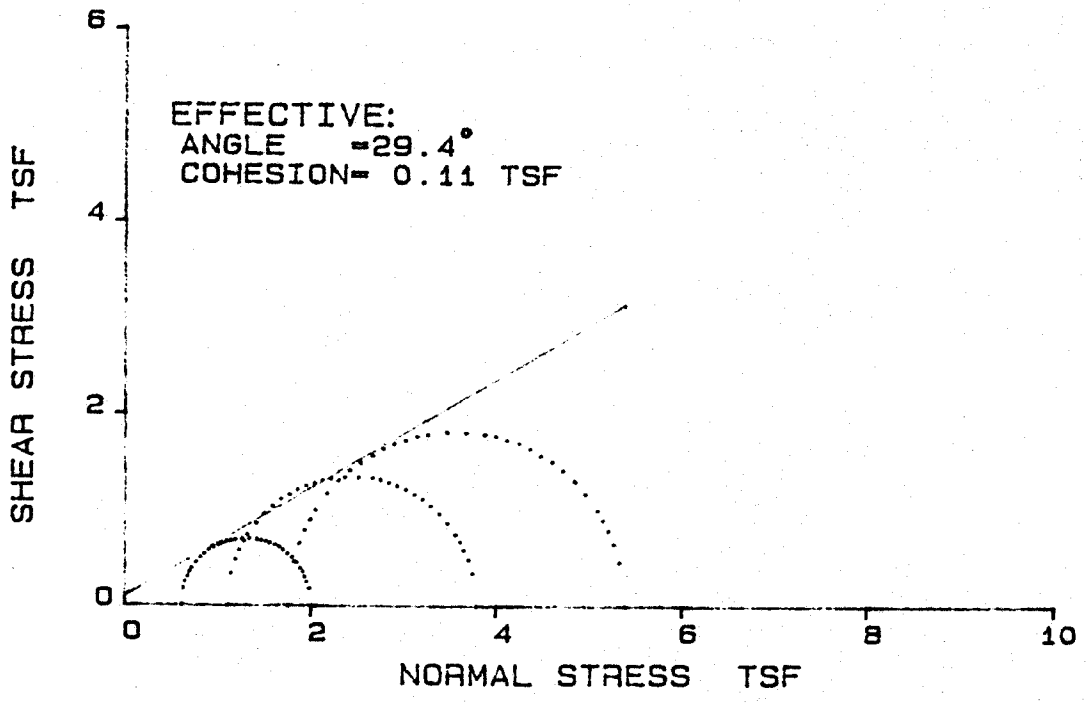
Remark:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW AREA
STATION:
RANGE :
BORING : US-34

EL. : 1133.68-1133.18
SAMPLE : 1
PART : 4
SOIL SYM: CL
DATE : 3-17-87



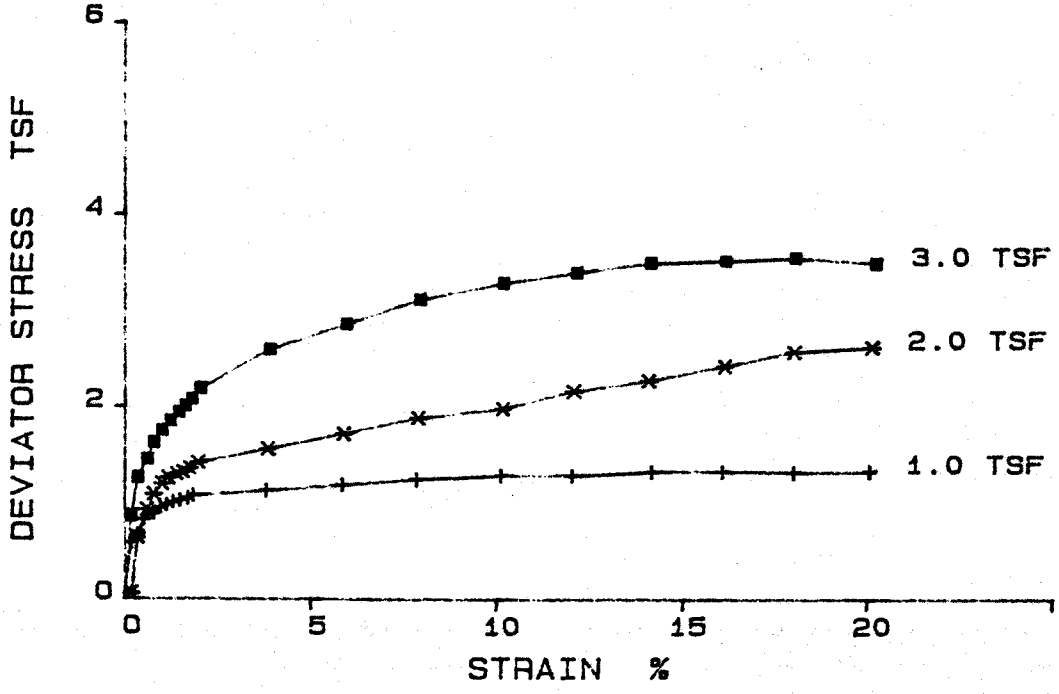


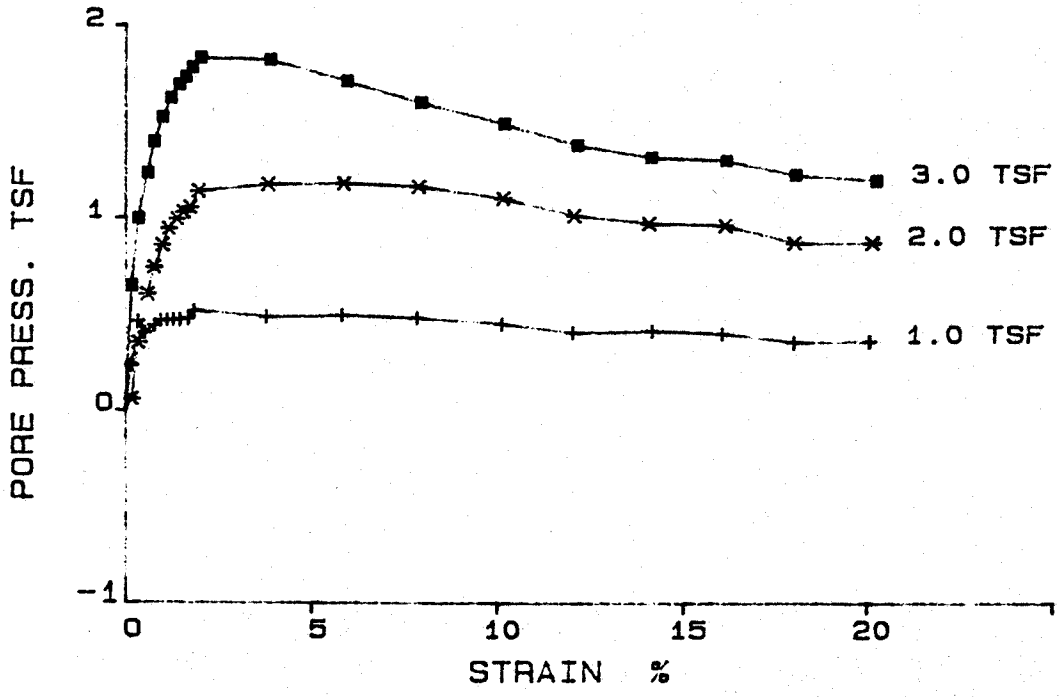
REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW AREA
STATION:
RANGE :
BORING : US-34

EL. : 1133.68-1133.18
SAMPLE : 1
PART : 4
SOIL SYM: CL
DATE : 3-17-87





REMARKS:

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
Consolidated Undrained Triaxial Compression (R) Test

Project: JOHN SEVIER S.P.
Feature: BORROW AREA
Station:
Range :
Boring : US-34

El. : 1133.68-1133.18
Sample: 1
Part : 4

Tested By : EJL TAL
Computed By: MHD.
Checked By : [illegible]
Report Date: 3-17-87

Soil Symbol= CL
Sp. Gr. = 2.67

L.L.(%)= 29
D10(mm)= 0

P.I.(%) = 17

Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	20.0	19.6	19.4	0.0
Dry Density(pcf)	106.1	106.3	107.0	0.0
Void Ratio	0.572	0.568	0.558	0.000
Saturation(%)	93.3	92.0	92.7	0.0
Before Shearing:				
Moisture(%) (after satur.)	21.4	21.3	20.9	0.0
Saturation(%)	100.0	100.0	100.0	0.0
Moisture(%) (after cons.)	18.6	18.0	17.1	0.0
Void Ratio (after cons.)	0.498	0.480	0.456	0.000
Final Moisture Content(%)	19.7	18.6	17.4	0.0
Minor Principal Stress(tsf)	1.01(1.01)	2.02(2.02)	3.02(3.02)	0.00(0.00)
Major Principal Stress(tsf)	2.42(2.31)	4.72(4.51)	6.67(6.22)	0.00(0.00)
Eff. Minor Prin Stress(tsf)	0.60(0.50)	1.10(1.02)	1.76(1.40)	0.00(0.00)
Eff. Major Prin Stress(tsf)	2.02(1.80)	3.80(3.51)	5.41(4.59)	0.00(0.00)
Time to Failure(min)	100	100	90	0
Rate of Strain(%/min)	0.20	0.20	0.20	0.00
Specimen Height(in.)	3.15	3.15	3.15	0.00
Specimen Dia (in.)	1.40	1.40	1.40	0.00

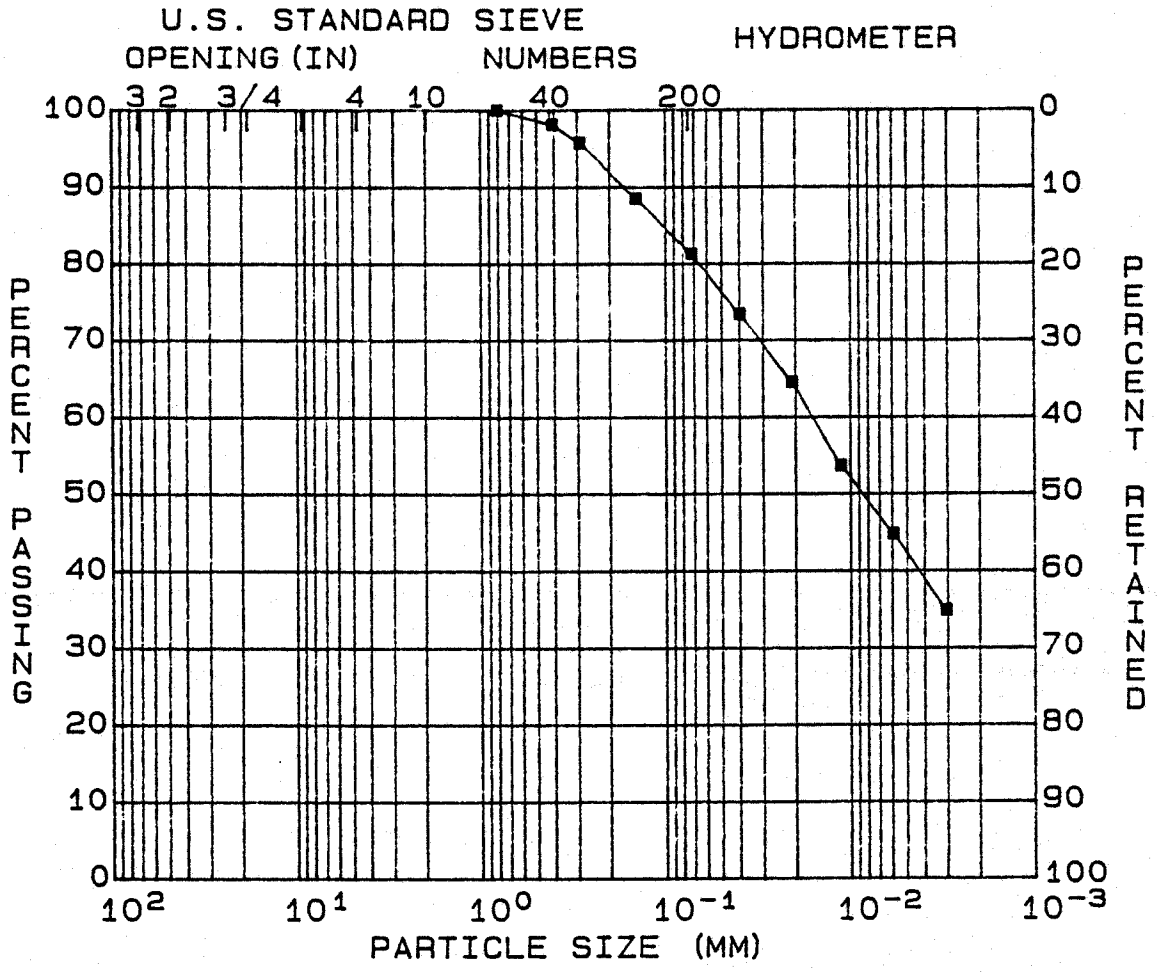
Shear Strength	Max Deviator Stress Deg	Max Deviator Stress c(tsf)	Max Eff Stress Ratio Deg	Max Eff Stress Ratio c(tsf)
Apparent	20.9	0.12	18.7	0.15
Effective	29.4	0.11	30.9	0.08

Remark:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: US-35
EL. : 1138.53-1136.63
SAMPLE: 1
DATE : 03-02-87

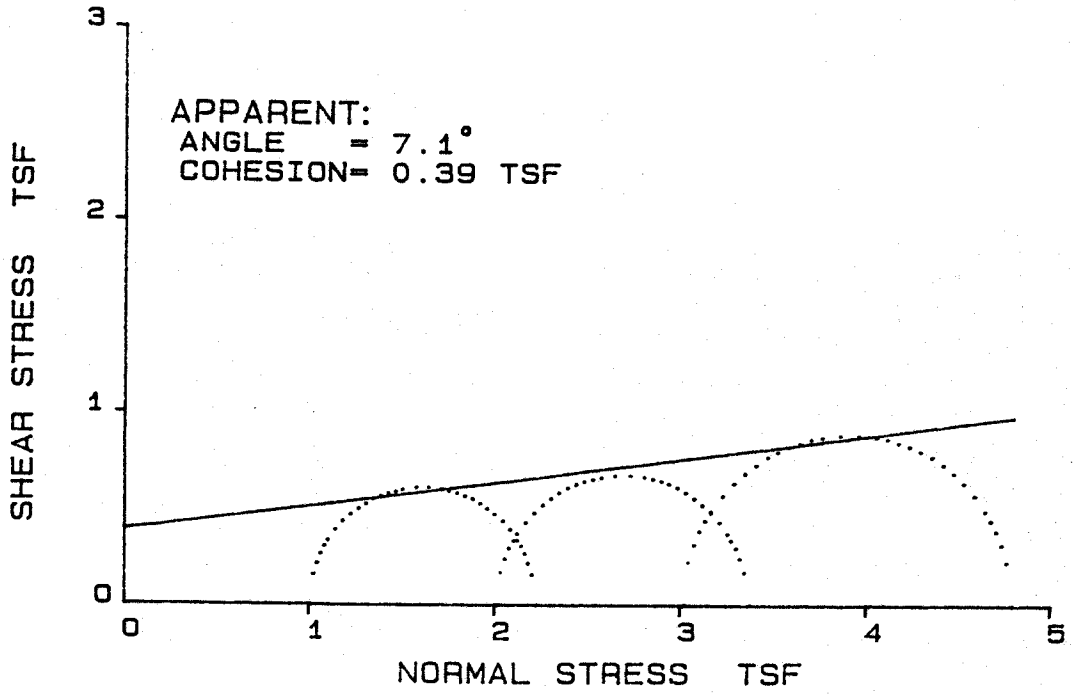


GRAVEL (%)	= 0	D10 (MM)	= --
SAND (%)	= 18	D30 (MM)	= --
SILT (%)	= 39	D60 (MM)	= --
CLAY (%)	= 43	COEF UNIF	= --
SOIL SYMBOL	= CL	L.L. (%)	= 24
MOISTURE (%)	= 17.8	P.I. (%)	= 10
SP. GR.	= 2.69		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

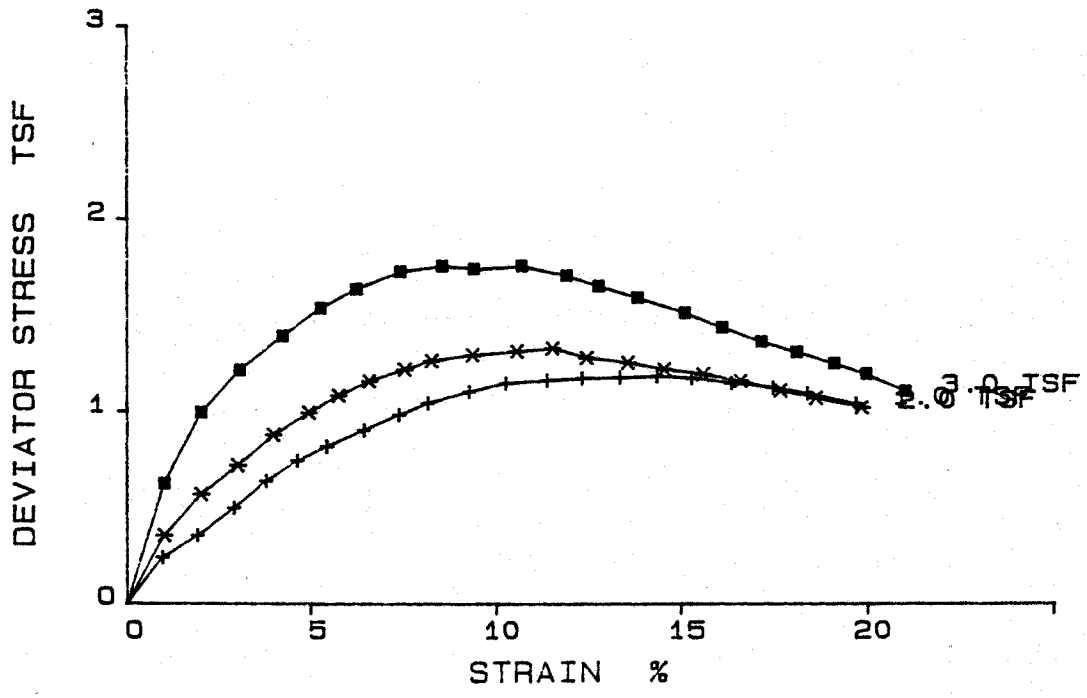
PROJECT:	JOHN SEVIER S.P.	EL.	: 1138.23-1137.73
FEATURE:	BORROW RECLAM	SAMPLE	: 1
STATION:		PART	: 2
RANGE	:	SOIL SYM:	CL
BORING	: US-35	DATE	: 03-10-87



REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

PROJECT:	JOHN SEVIER S.P.	EL.	: 1138.23-1137.73
FEATURE:	BORROW RECLAM	SAMPLE	: 1
STATION:		PART	: 2
RANGE :		SOIL SYM:	CL
BORING :	US-35	DATE	: 03-10-87



REMARKS:

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION(Q) TEST

Project: JOHN SEVIER S.P.
Feature: BORROW RECLAM
Station:
Range :
Boring : US-35

El. : 1138.23-1137.73
Sample: 1
Part : 2

Tested By : TAL
Computed By: MHD
Checked By : LEG
Report Date: 03-10-87

Soil Symbol= CL
Sp. Gr. = 2.69

L.L.(%)= 24
D10(mm)=

P.I.(%) = 10

Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	15.0	14.6	14.8	0.0
Dry Density(pcf)	113.5	114.4	112.5	0.0
Void Ratio	0.479	0.468	0.493	0.000
Saturation(%)	84.4	83.8	80.5	0.0
Before Shearing:				
Moisture(%) (after satur.)	--	--	--	--
Saturation(%)	--	--	--	--
Moisture(%) (after cons.)	--	--	--	--
Void Ratio (after cons.)	--	--	--	--
Final Moisture Content(%)	14.8	14.4	14.5	0.0
Minor Principal Stress(tsf)	1.01	2.02	3.02	0.00
Major Principal Stress(tsf)	2.23	3.37	4.81	0.00
Eff. Minor Prin Stress (tsf)	--	--	--	--
Eff. Major Prin Stress (tsf)	--	--	--	--
Time to Failure(min)	15	12	10	0
Rate of Strain(%/min)	0.97	0.98	1.08	0.00
Specimen Height(in.)	3.13	3.13	3.13	0.00
Specimen Dia (in.)	1.41	1.41	1.41	0.00

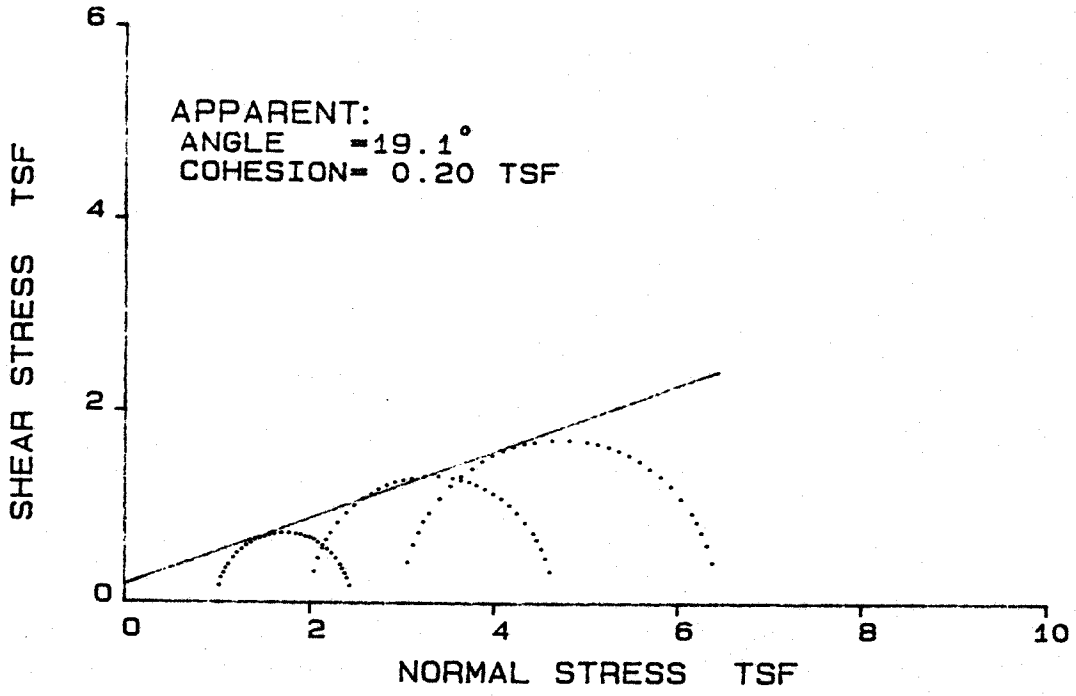
Shear Strength	Max Deviator Stress Deg	Max Deviator Stress c(tsf)	Max Eff Deg	Stress Ratio c(tsf)
Apparent	7.1	0.39		
Effective	--	--		

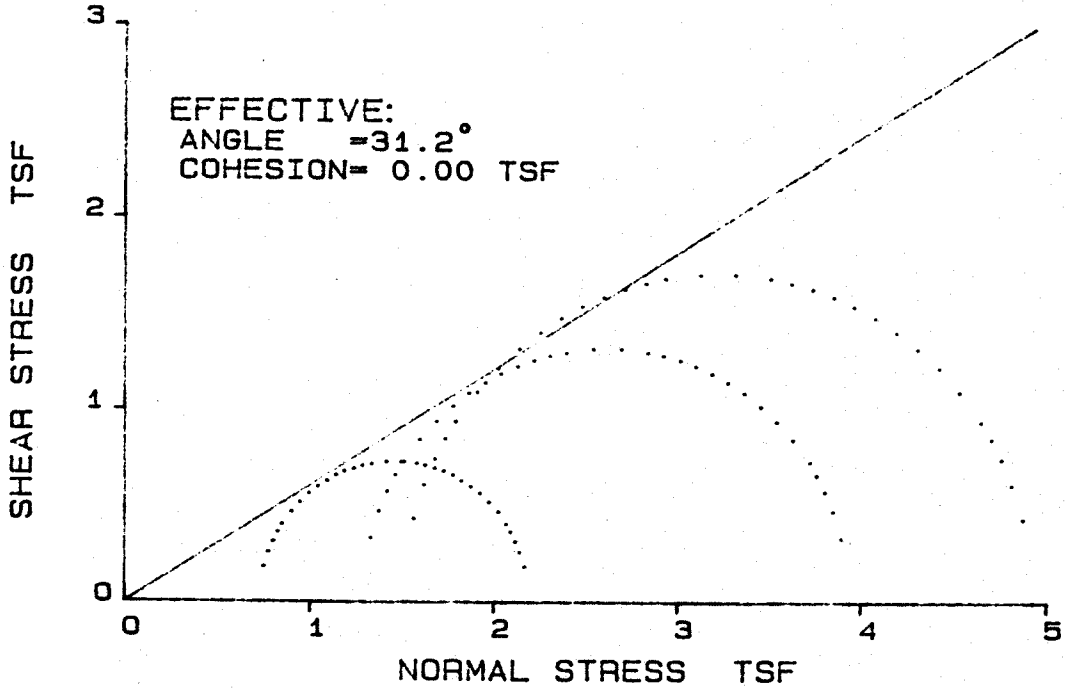
Remark:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW AREA
STATION:
RANGE :
BORING : US-35

EL. : 1137.73-1137.23
SAMPLE : 1
PART : 3
SOIL SYM: CL
DATE : 03-16-87



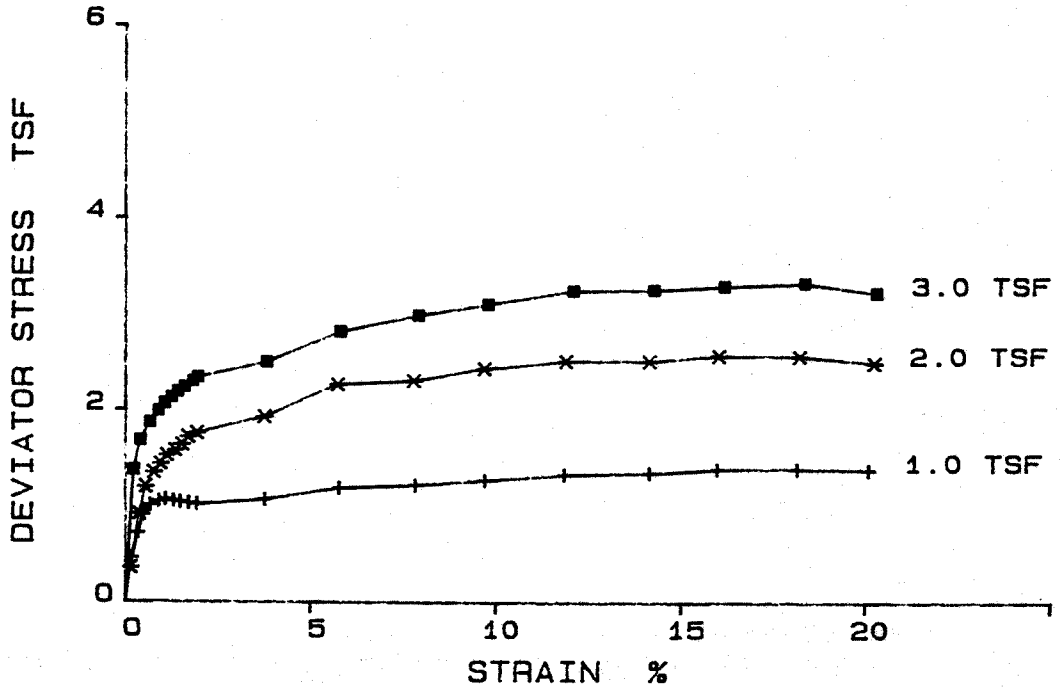


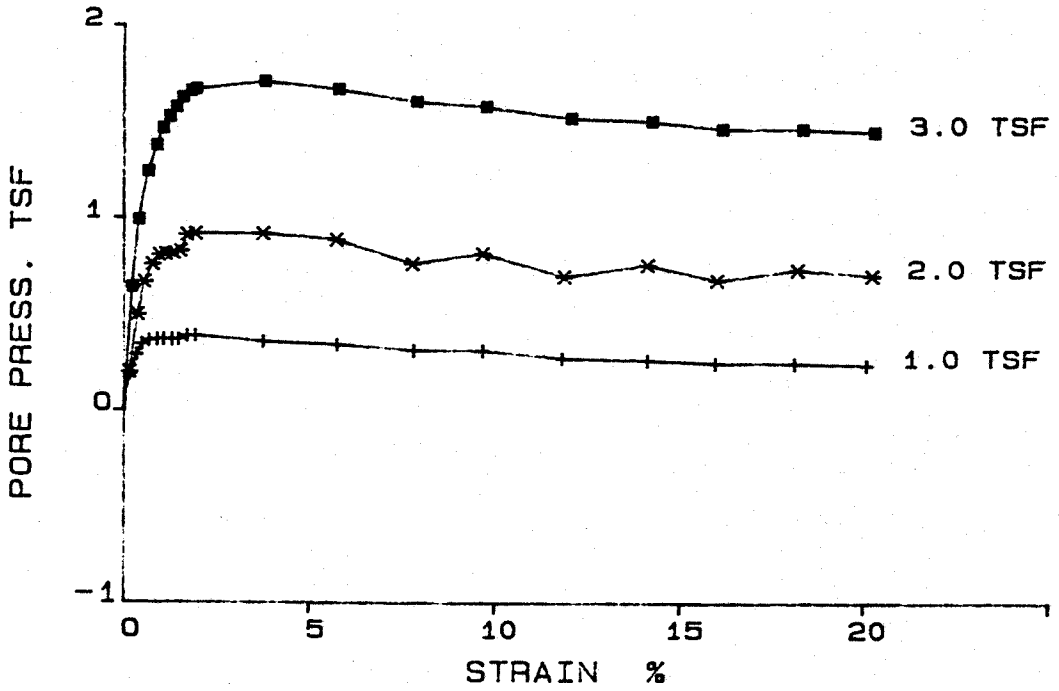
REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW AREA
STATION:
RANGE :
BORING : US-35

EL. : 1137.73-1137.23
SAMPLE : 1
PART : 3
SOIL SYM: CL
DATE : 03-16-87





REMARKS:

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

Project: JOHN SEVIER S.P.
Feature: BORROW AREA
Station:
Range :
Boring : US-35

El. : 1137.73-1137.23
Sample: 1
Part : 3

Tested By : TAL
Computed By: MHD
Checked By : JEC
Report Date: 03-16-87

Soil Symbol= CL
Sp. Gr. = 2.69

L.L.(%)= 24
D10(mm)= 0

P.I.(%) = 10

Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	16.5	16.6	16.0	0.0
Dry Density(pcf)	108.7	108.7	109.0	0.0
Void Ratio	0.544	0.545	0.541	0.000
Saturation(%)	81.5	81.7	79.7	0.0
Before Shearing:				
Moisture(%) (after satur.)	20.2	20.3	20.1	0.0
Saturation(%)	100.0	100.0	100.0	0.0
Moisture(%) (after cons.)	19.1	17.8	17.1	0.0
Void Ratio (after cons.)	0.515	0.478	0.460	0.000
Final Moisture Content(%)	16.4	15.6	15.2	0.0
Minor Principal Stress(tsf)	1.01(1.01)	2.02(2.02)	3.02(3.02)	0.00(0.00)
Major Principal Stress(tsf)	2.47(2.47)	4.66(4.51)	6.44(6.34)	0.00(0.00)
Eff. Minor Prin Stress(tsf)	0.73(0.73)	1.30(1.17)	1.52(1.47)	0.00(0.00)
Eff. Major Prin Stress(tsf)	2.20(2.20)	3.94(3.67)	4.94(4.78)	0.00(0.00)
Time to Failure(min)	90	80	90	0
Rate of Strain(%/min)	0.20	0.20	0.21	0.00
Specimen Height(in.)	3.13	3.13	3.13	0.00
Specimen Dia (in.)	1.41	1.41	1.41	0.00

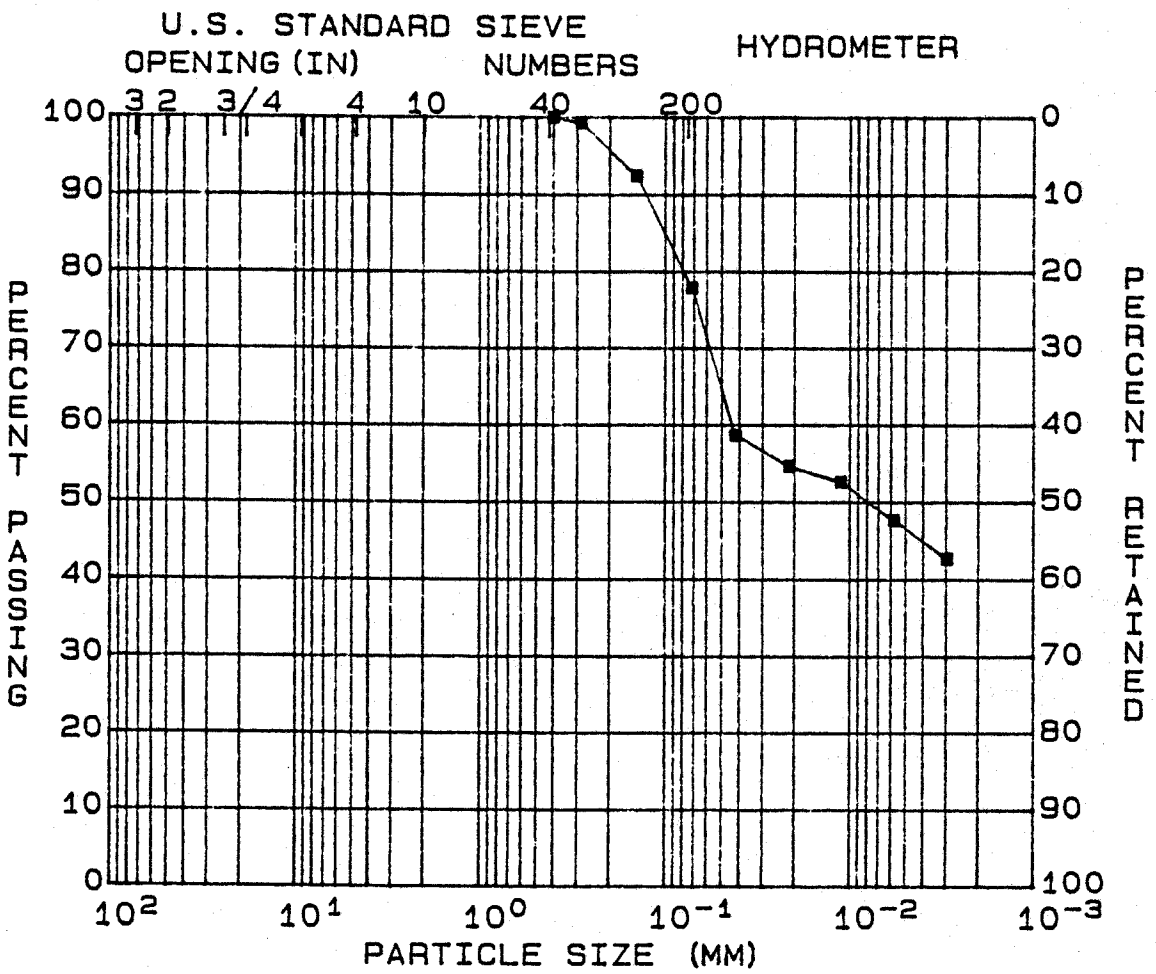
Shear Strength	Max Deviator Stress Deg	Max Deviator Stress c(tsf)	Max Eff Stress Ratio Deg	Max Eff Stress Ratio c(tsf)
Apparent	19.1	0.20	18.3	0.21
Effective	31.2	0.00	90.0	0.00

Remark:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: US-35
EL. : 1136.03-1134.63
SAMPLE: 2
DATE : 03-02-87

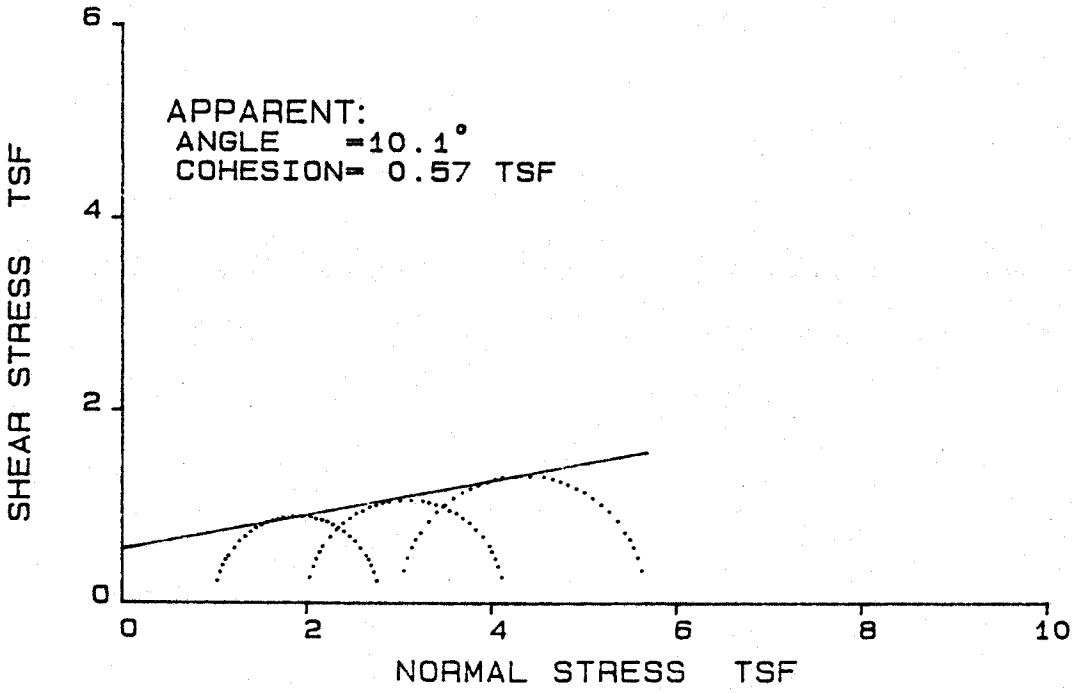


GRAVEL (%)	= 0	D10 (MM)	= --
SAND (%)	= 22	D30 (MM)	= --
SILT (%)	= 32	D60 (MM)	= --
CLAY (%)	= 46	COEF UNIF	= --
SOIL SYMBOL	= CH/CL	L.L. (%)	= 51
MOISTURE (%)	= 26.3	P.I. (%)	= 28
SP. GR.	= 2.70		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

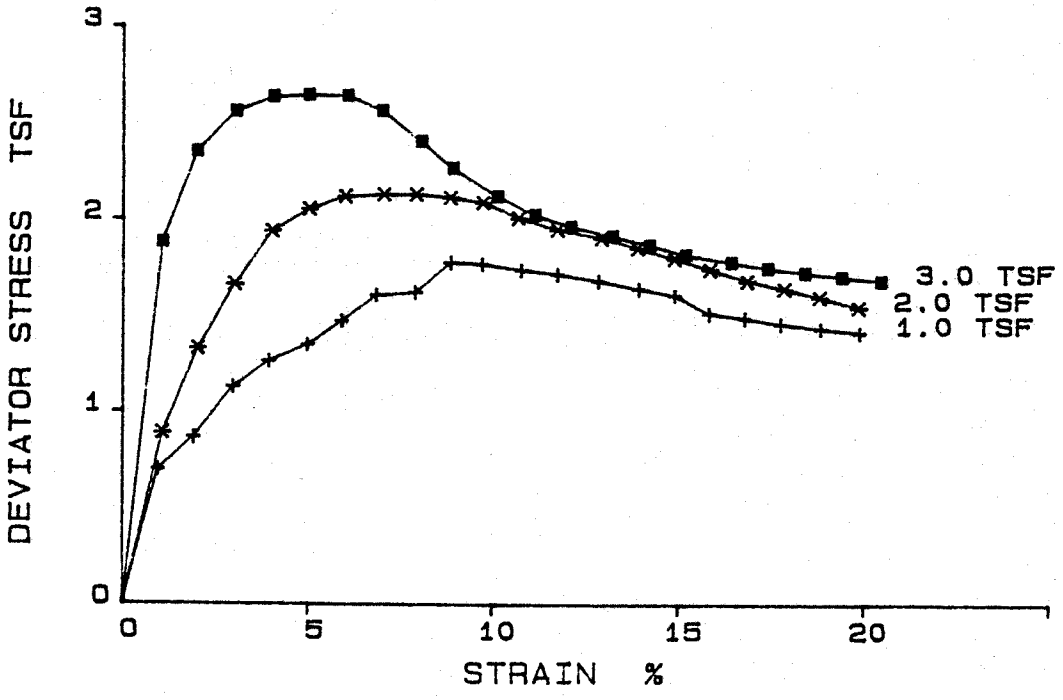
PROJECT:	JOHN SEVIER S.P.	EL.	: 1136.03-1135.53
FEATURE:	BORROW RECLAM	SAMPLE	: 2
STATION:		PART	: 1
RANGE :		SOIL SYM:	CH/CL
BORING :	US-35	DATE	: 3-10-87



REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

PROJECT:	JOHN SEVIER S.P.	EL.	: 1136.03-1135.53
FEATURE:	BORROW RECLAM	SAMPLE	: 2
STATION:		PART	: 1
RANGE :		SOIL SYM:	CH/CL
BORING :	US-35	DATE	: 3-10-87



REMARKS:

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
Unconsolidated Undrained Triaxial Compression (Q) Test

Project: JOHN SEVIER S.P.
Feature: BORROW RECLAM
Station:
Range :
Boring : US-35

El. : 1136.03-1135.53
Sample: 2
Part : 1

Tested By : TAL
Computed By: MHD
Checked By : [signature]
Report Date: 3-10-87

Soil Symbol= CH/CL
Sp. Gr. = 2.7

L.L.(%)= 51
D10(mm)=

P.I.(%) = 28

Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	30.9	28.8	29.5	0.0
Dry Density(pcf)	90.2	92.3	90.7	0.0
Void Ratio	0.869	0.826	0.859	0.000
Saturation(%)	96.0	94.3	92.8	0.0
Before Shearing:				
Moisture(%) (after satur.)	--	--	--	--
Saturation(%)	--	--	--	--
Moisture(%) (after cons.)	--	--	--	--
Void Ratio (after cons.)	--	--	--	--
Final Moisture Content(%)	30.9	28.8	28.1	0.0
Minor Principal Stress(tsf)	1.01	2.02	3.02	0.00
Major Principal Stress(tsf)	2.81	4.17	5.69	0.00
Eff. Minor Prin Stress (tsf)	--	--	--	--
Eff. Major Prin Stress (tsf)	--	--	--	--
Time to Failure(min)	9	8	5	0
Rate of Strain(%/min)	0.99	1.01	1.01	0.00
Specimen Height(in.)	3.13	3.13	3.13	0.00
Specimen Dia (in.)	1.41	1.41	1.41	0.00

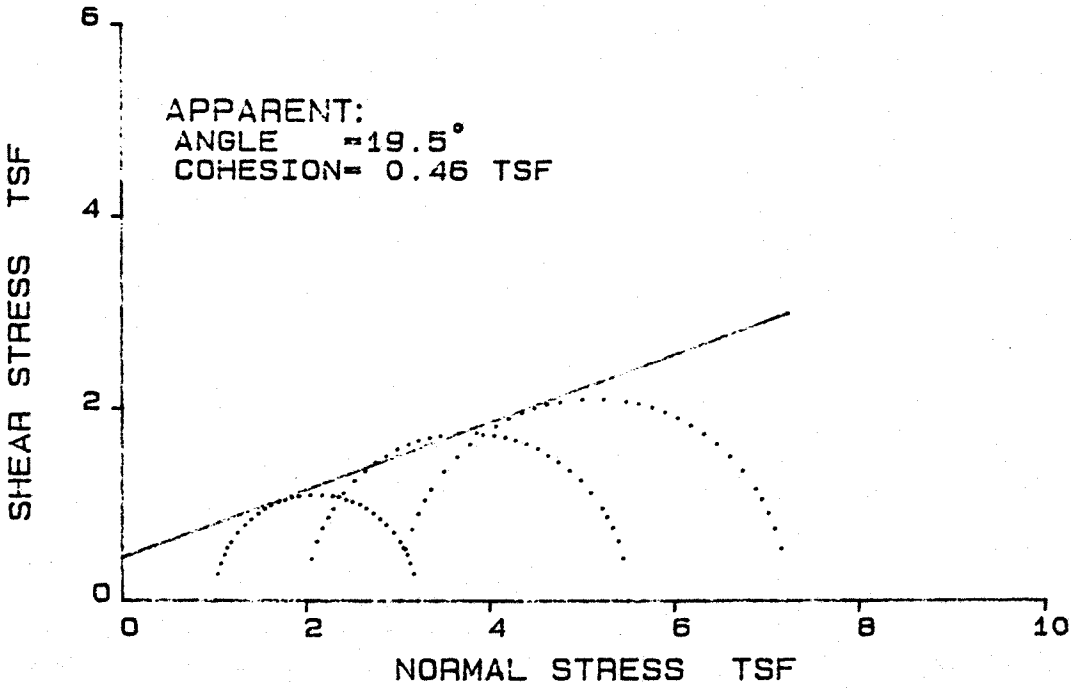
Shear Strength	Max Deviator Stress Deg	c(tsf)	Max Eff Deg	Stress Ratio c(tsf)
Apparent	10.1	0.57		
Effective	--	--		

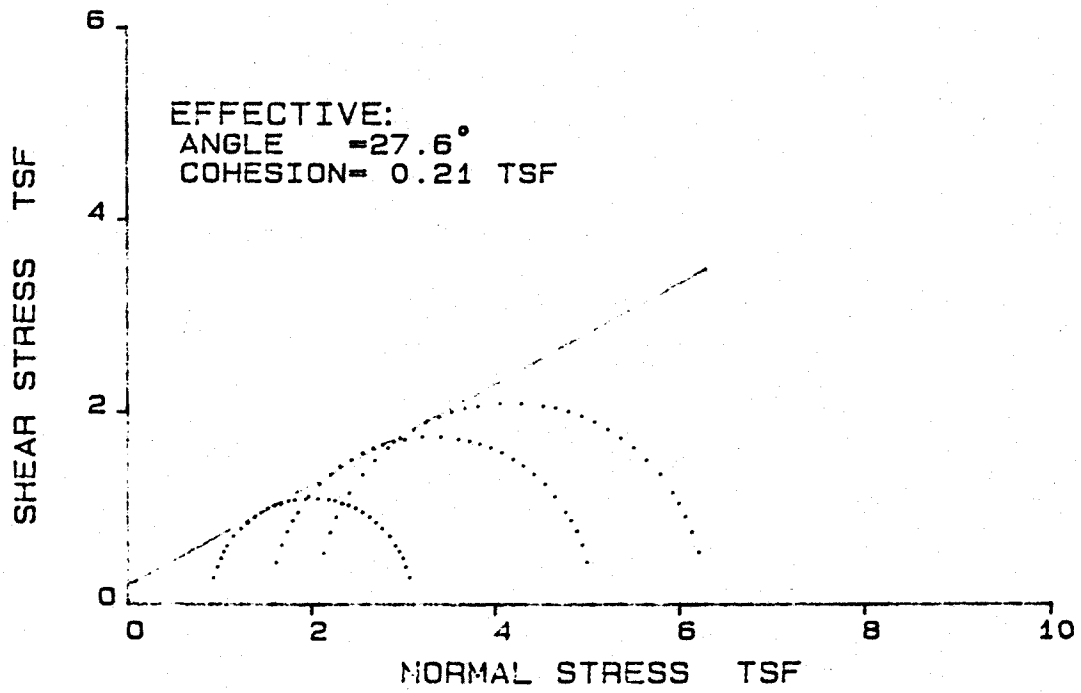
Remark:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW AREA
STATION:
RANGE :
BORING : US-35

EL. : 1135.53-1135.03
SAMPLE : 2
PART : 2
SOIL SYM: CH/CL
DATE : 03-17-87

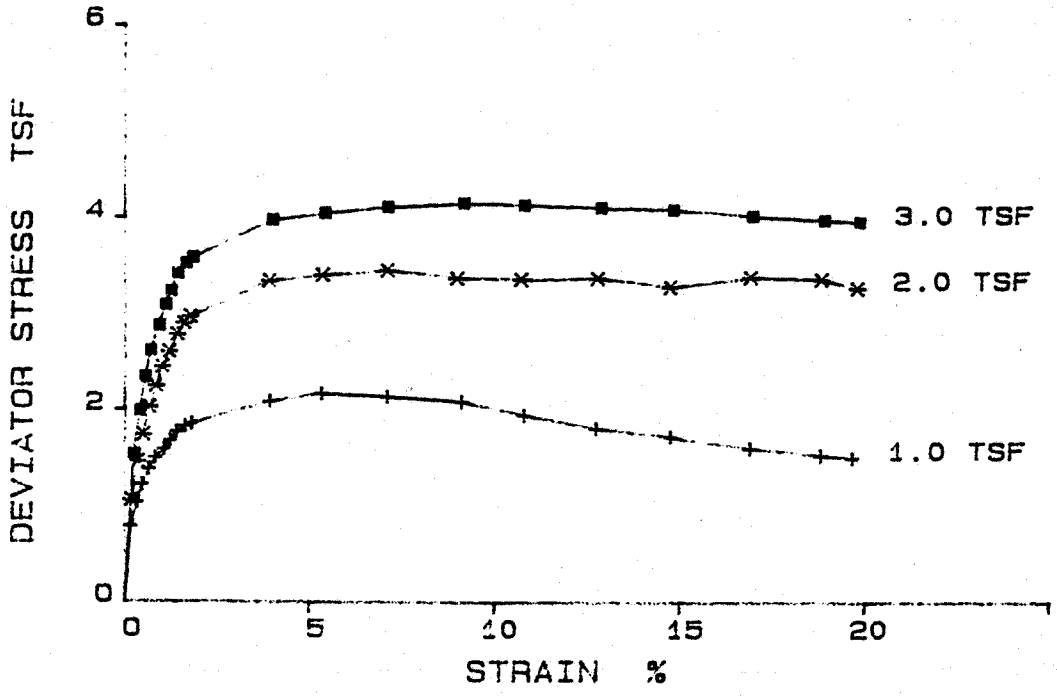


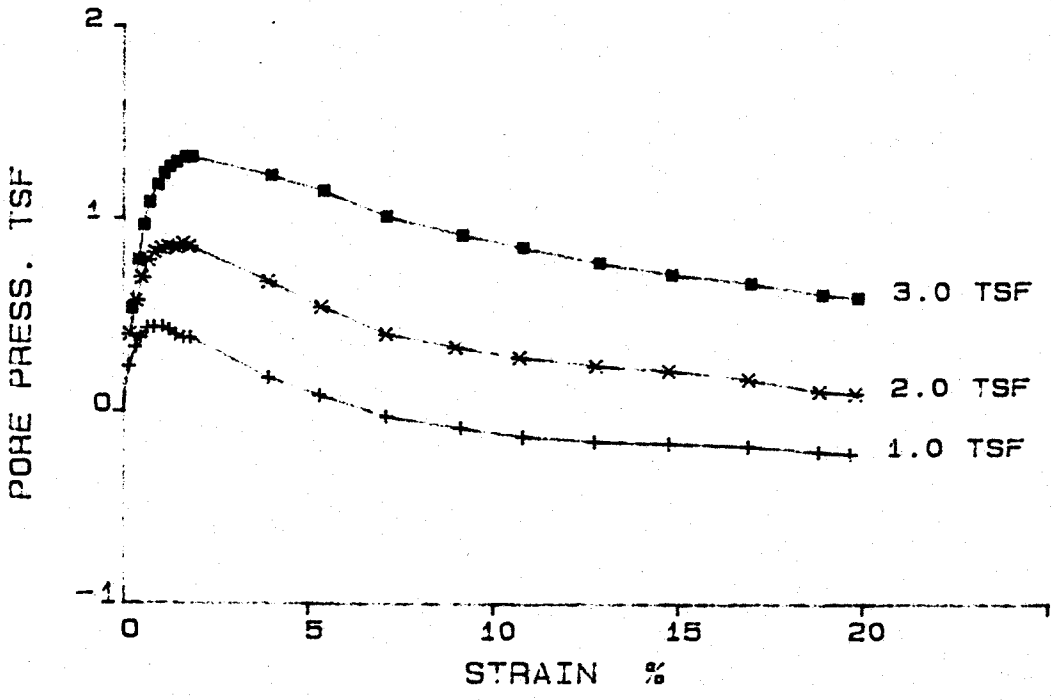


REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT:	JOHN SEVIER S.P.	EL.	: 1135.53-1135.03
FEATURE:	BORROW AREA	SAMPLE	: 2
STATION:		PART	: 2
RANGE	:	SOIL SYM:	CH/CL
BORING	: US-35	DATE	: 03-17-87





REMARKS:

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
Consolidated Undrained Triaxial Compression (R) Test

Project: JOHN SEVIER S.P.
Feature: BORROW AREA
Station:
Range :
Boring : US-35

El. : 1135.53-1135.03
Sample: 2
Part : 2

Tested By : TAL
Computed By: MHD
Checked By : CBC
Report Date: 03-17-87

Soil Symbol= CH/CL
Sp. Gr. = 2.7

L.L.(%)= 51
D10(mm)= 0

P.I.(%) = 28

Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	32.2	32.5	32.6	0.0
Dry Density(pcf)	88.6	88.6	88.2	0.0
Void Ratio	0.902	0.902	0.912	0.000
Saturation(%)	96.5	97.3	96.5	0.0
Before Shearing:				
Moisture(%) (after satur.)	33.4	33.4	33.8	0.0
Saturation(%)	100.0	100.0	100.0	0.0
Moisture(%) (after cons.)	30.7	28.4	28.5	0.0
Void Ratio (after cons.)	0.830	0.767	0.769	0.000
Final Moisture Content(%)	33.3	33.2	32.8	0.0
Minor Principal Stress(tsf)	1.01(1.01)	2.02(2.02)	3.02(3.02)	0.00(0.00)
Major Principal Stress(tsf)	3.23(2.91)	5.52(5.04)	7.24(7.05)	0.00(0.00)
Eff. Minor Prin Stress(tsf)	0.91(0.61)	1.58(1.13)	2.07(1.77)	0.00(0.00)
Eff. Major Prin Stress(tsf)	3.13(2.52)	5.08(4.15)	6.29(5.80)	0.00(0.00)
Time to Failure(min)	30	40	50	0
Rate of Strain(%/min)	0.18	0.18	0.19	0.00
Specimen Height(in.)	3.13	3.13	3.13	0.00
Specimen Dia (in.)	1.41	1.41	1.41	0.00

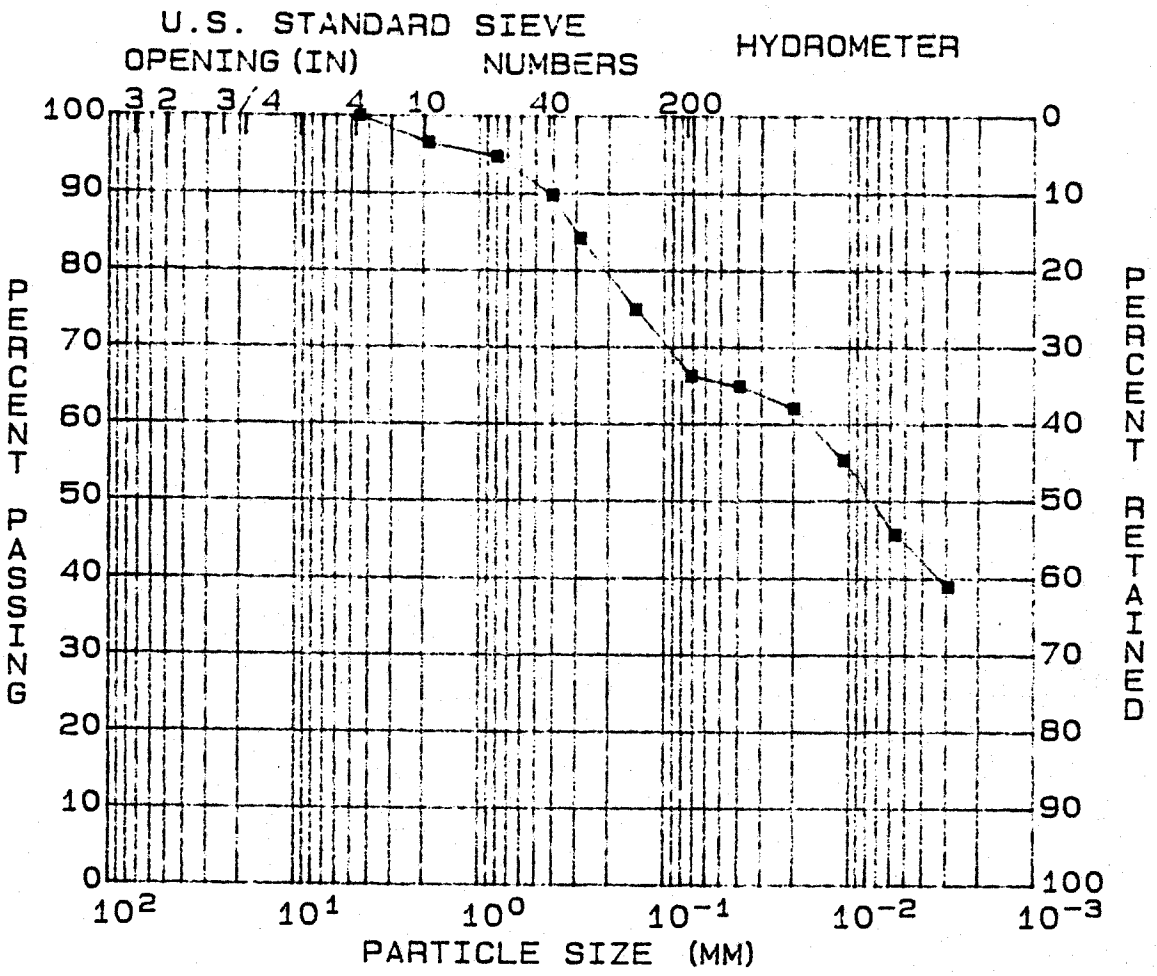
Shear Strength	Max Deviator Stress Deg	Max Deviator Stress c(tsf)	Max Eff Stress Ratio Deg	Max Eff Stress Ratio c(tsf)
Apparent	19.5	0.46	20.2	0.30
Effective	27.6	0.21	28.5	0.25

Remark:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW AREA
STATION:
RANGE :

BORING:
EL. :
SAMPLE: CLASS I
DATE : 3-17-87

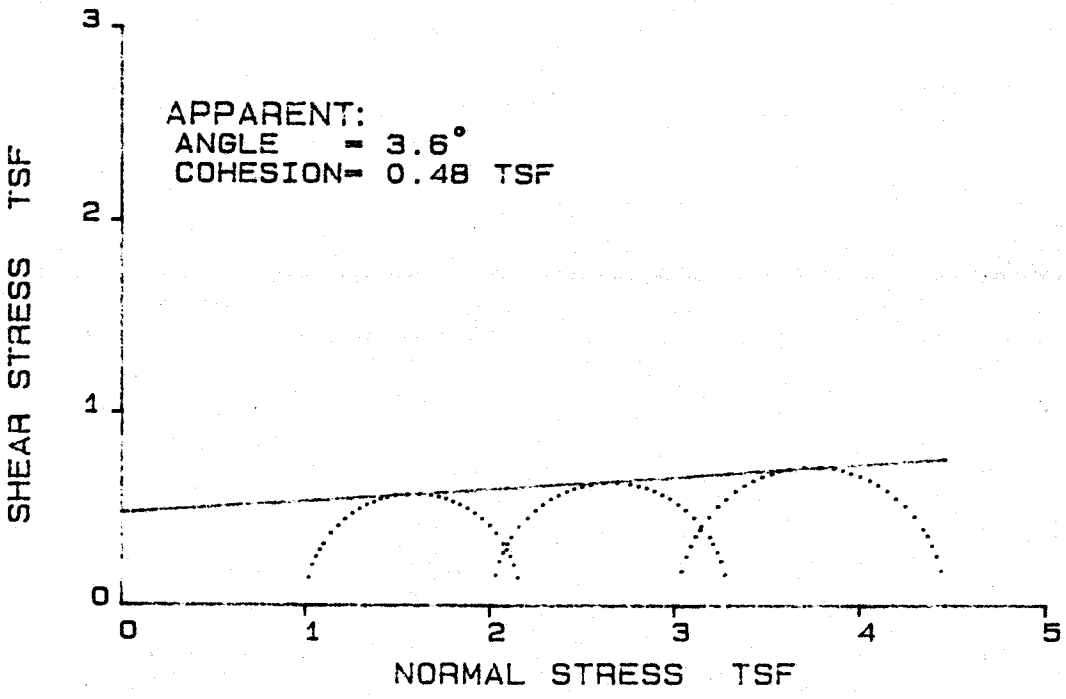


GRAVEL (%)	= 0	D10 (MM)	= --
SAND (%)	= 33	D30 (MM)	= --
SILT (%)	= 22	D60 (MM)	= --
CLAY (%)	= 45	COEF UNIF	= --
SOIL SYMBOL	= CL	L.L. (%)	= 32
MOISTURE (%)	= --	P.I. (%)	= 16
SP. GR.	= 2.70		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

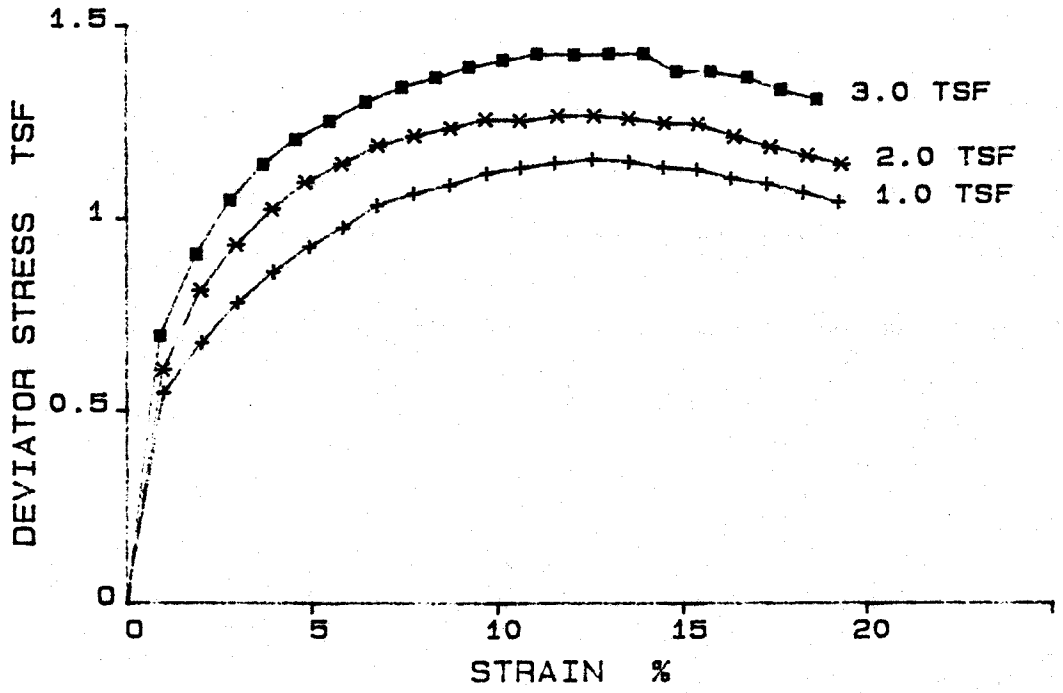
PROJECT:	JOHN SEVIER S.P.	EL.	:
FEATURE:	BORROW AREA	SAMPLE	: CLASS I
STATION:		PART	:
RANGE	:	SOIL SYM:	CL
BORING	:	DATE	: 3-17-87



REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

PROJECT:	JOHN SEVIER S.P.	EL.	:
FEATURE:	BORROW AREA	SAMPLE	: CLASS I
STATION:		PART	:
RANGE	:	SOIL SYM:	CL
BORING	:	DATE	: 3-17-87



REMARKS: REMOLDED AT 3 (%) WET OF OPTIMUM MOISTURE AND AT 95 (%) MAXIMUM UNIT WEIGHT.

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
Unconsolidated Undrained Triaxial Compression (Q) Test

Project: JOHN SEVIER S.P.
Feature: BORROW AREA RECLAM
Station:
Range :
Boring :

El. :
Sample: CLASS I
Part :

Tested By : CBE
Computed By: MHD
Checked By : TAL
Report Date: 3-17-87

Soil Symbol= CL
Sp. Gr. = 2.7

L.L.(%)= 32
D10(mm)=

P.I.(%) = 16

Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	18.5	18.4	18.6	0.0
Dry Density(pcf)	99.9	99.9	100.0	0.0
Void Ratio	0.687	0.687	0.686	0.000
Saturation(%)	72.5	72.2	73.2	0.0
Before Shearing:				
Moisture(%) (after satur.)	--	--	--	--
Saturation(%)	--	--	--	--
Moisture(%) (after cons.)	--	--	--	--
Void Ratio (after cons.)	--	--	--	--
Final Moisture Content(%)	18.5	18.5	18.5	0.0
Minor Principal Stress(tsf)	1.01	2.02	3.02	0.00
Major Principal Stress(tsf)	2.18	3.30	4.47	0.00
Eff. Minor Prin Stress (tsf)	--	--	--	--
Eff. Major Prin Stress (tsf)	--	--	--	--
Time to Failure(min)	13	13	15	0
Rate of Strain(%/min)	0.98	0.98	0.94	0.00
Specimen Height(in.)	3.16	3.16	3.16	0.00
Specimen Dia (in.)	1.40	1.40	1.40	0.00

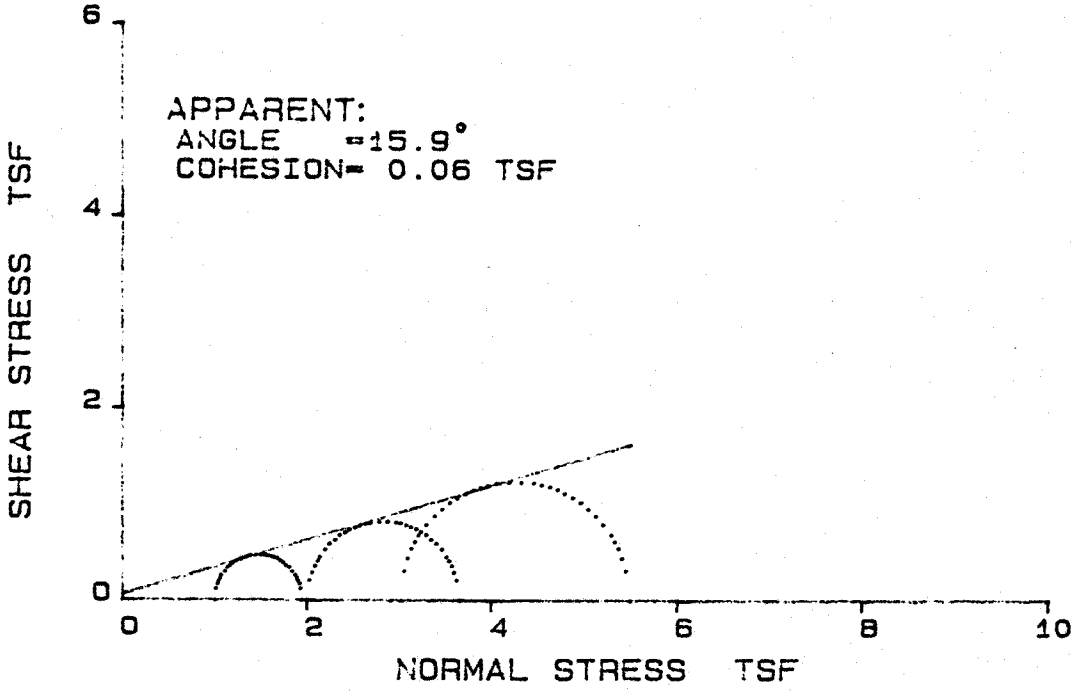
Shear Strength	Max Deviator Stress Deg	c(tsf)	Max Eff Deg	Stress Ratio c(tsf)
Apparent	3.6	0.48		
Effective	--	--		

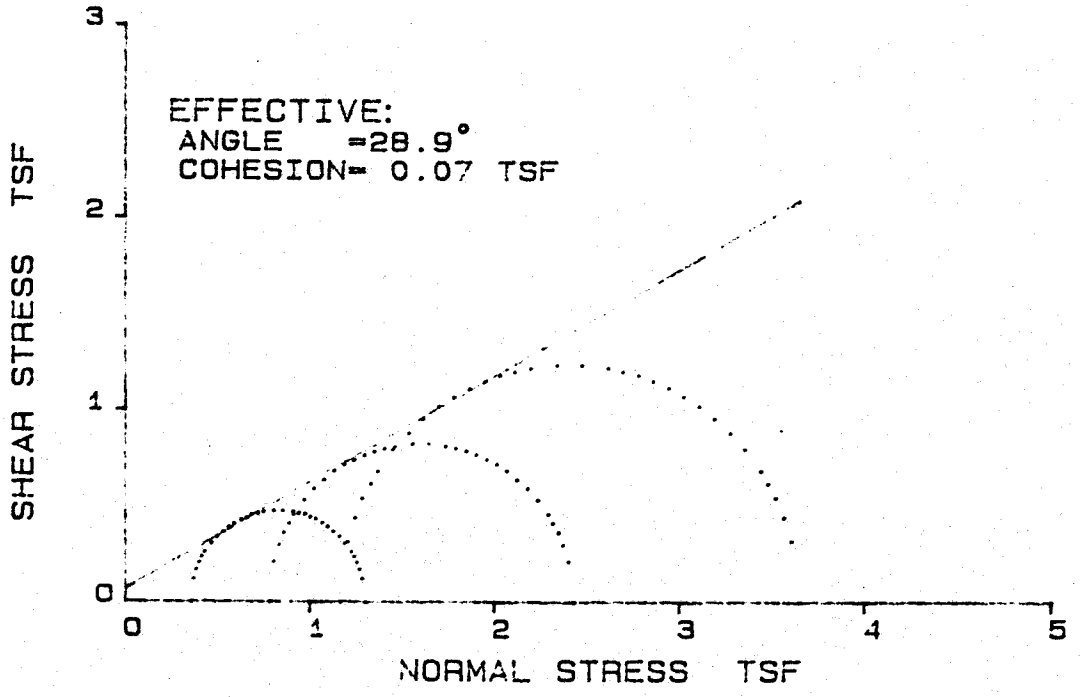
Remark: REMOLDED AT 3(%) WET OF OPTIMUM MOISTURE
AND AT 95(%) MAXIMUM UNIT WEIGHT.

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW AREA
STATION:
RANGE :
BORING :

EL. :
SAMPLE : CLASS I
PART :
SOIL SYM: CL
DATE : 03-17-87

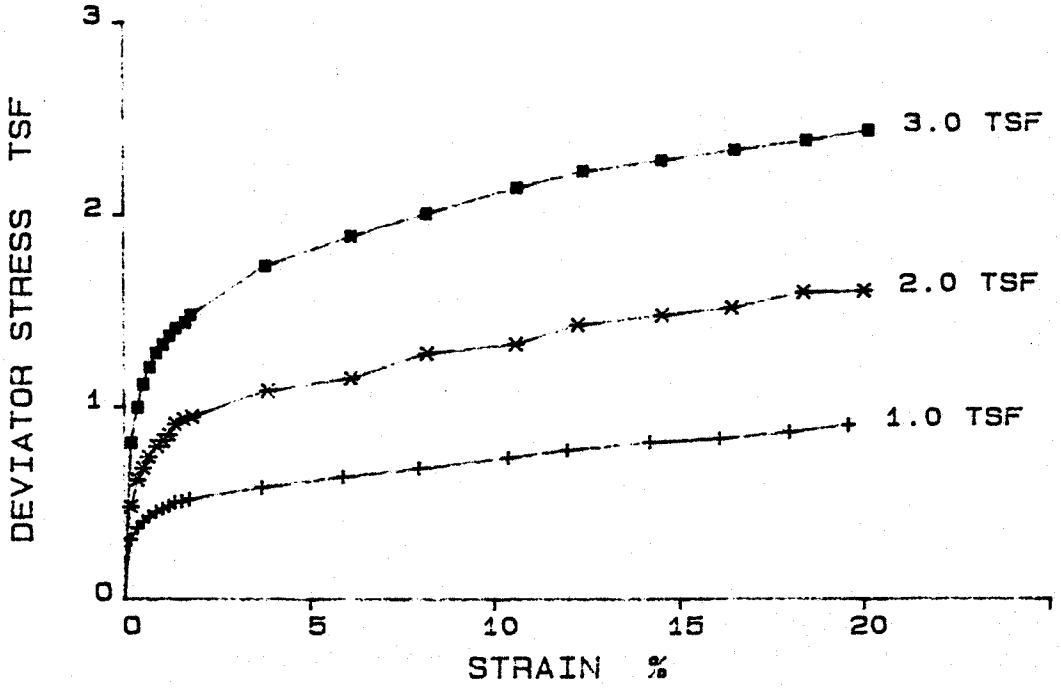


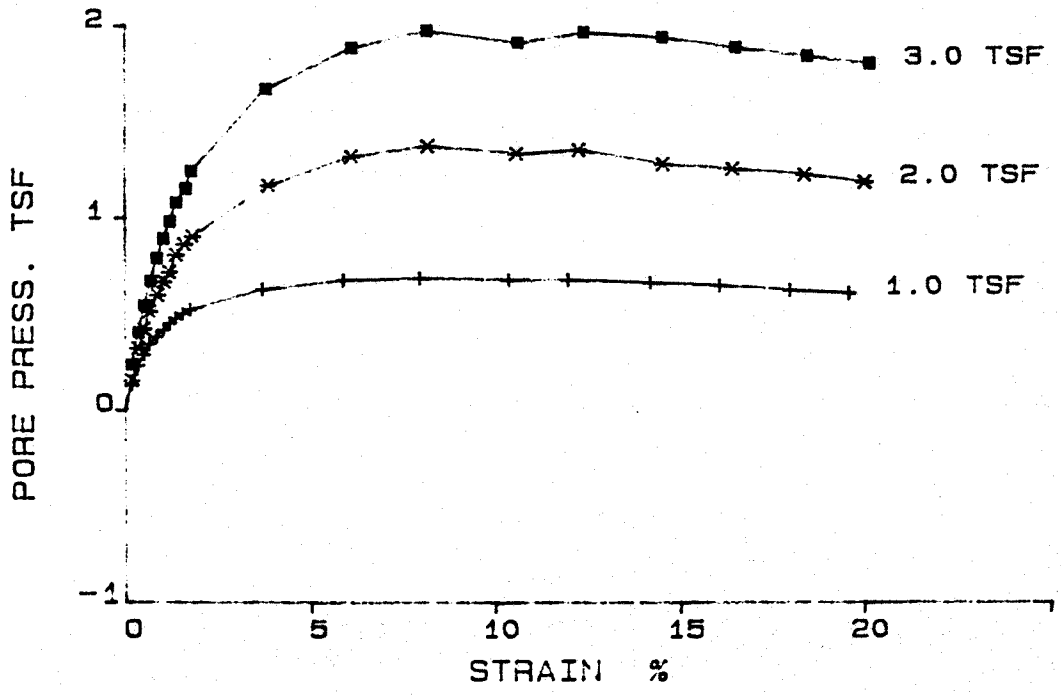


REMARKS: REMOLDED AT 3 (%) DRY OF OPTIMUM MOISTURE AND AT 95 (%) OF MAXIMUM UNIT WEIGHT.

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT:	JOHN SEVIER S.P.	EL.	:
FEATURE:	BORROW AREA	SAMPLE	: CLASS I
STATION:		PART	:
RANGE	:	SOIL SYM:	CL
BORING	:	DATE	: 03-17-87





REMARKS: REMOLDED AT 3 (%) DRY OF OPTIMUM MOISTURE AND AT 95 (%) OF MAXIMUM UNIT WEIGHT.

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

Project: JOHN SEVIER S.P.
Feature: BORROW AREA
Station:
Range :
Boring :

El. :
Sample: CLASS I
Part :

Tested By : TAL ~~CBE~~
Computed By: MHD
Checked By : CBE
Report Date: 03-17-87

Soil Symbol= CL
Sp. Gr. = 2.7

L.L.(%)= 32
D10(mm)= 0

P.I.(%) = 16

Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	12.2	12.3	12.3	0.0
Dry Density(pcf)	100.2	100.0	100.0	0.0
Void Ratio	0.682	0.685	0.685	0.000
Saturation(%)	48.2	48.7	48.7	0.0
Before Shearing:				
Moisture(%) (after satur.)	25.3	25.4	25.4	0.0
Saturation(%)	100.0	100.0	100.0	0.0
Moisture(%) (after cons.)	22.9	19.9	18.5	0.0
Void Ratio (after cons.)	0.619	0.536	0.500	0.000
Final Moisture Content(%)	19.3	19.0	17.6	0.0
Minor Principal Stress(tsf)	1.01(1.01)	2.02(2.02)	3.02(3.02)	0.00(0.00)
Major Principal Stress(tsf)	1.96(1.86)	3.67(3.48)	5.50(5.34)	0.00(0.00)
Eff. Minor Prin Stress(tsf)	0.36(0.31)	0.78(0.63)	1.17(1.04)	0.00(0.00)
Eff. Major Prin Stress(tsf)	1.31(1.17)	2.44(2.09)	3.65(3.36)	0.00(0.00)
Time to Failure(min)	100	100	100	0
Rate of Strain(%/min)	0.20	0.20	0.20	0.00
Specimen Height(in.)	3.16	3.16	3.16	0.00
Specimen Dia (in.)	1.40	1.40	1.40	0.00

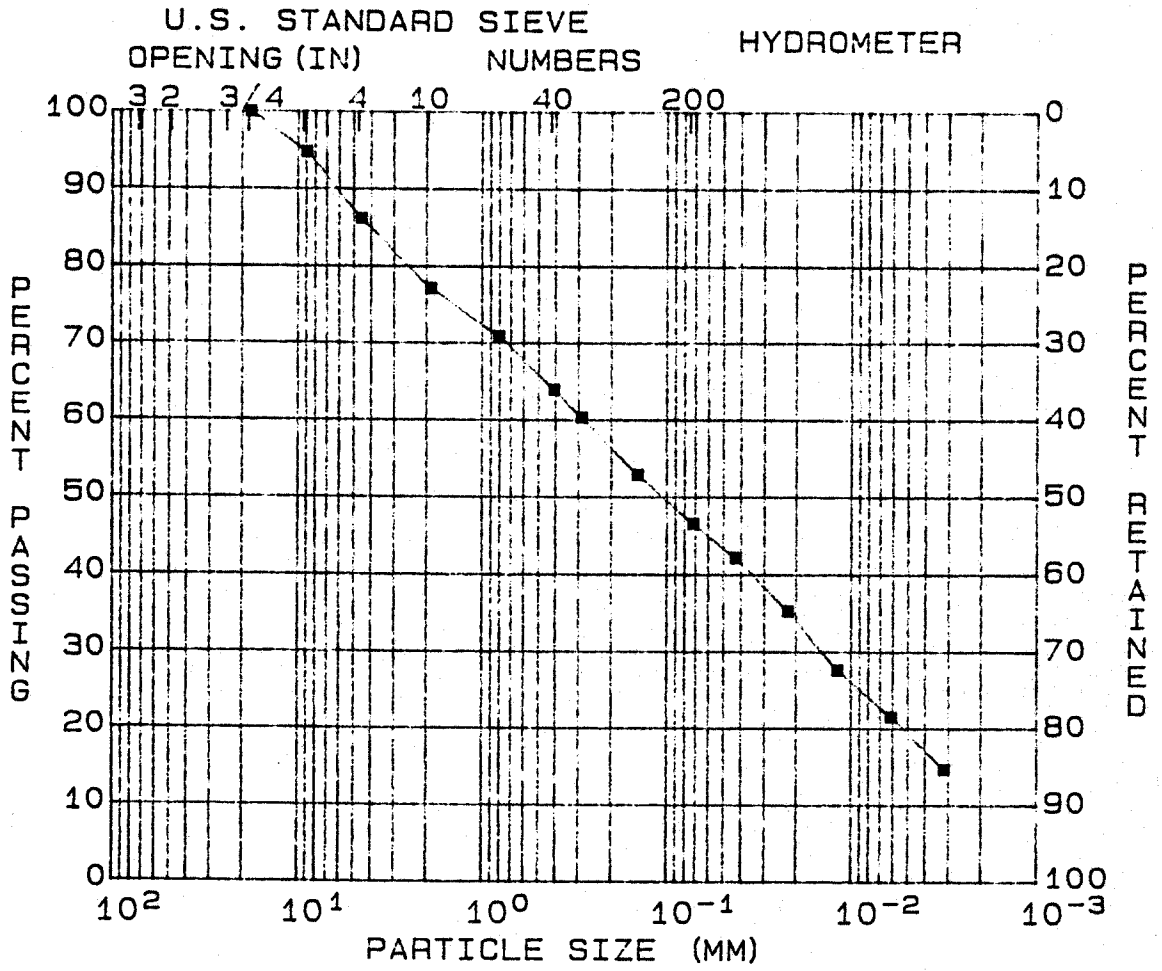
Shear Strength	Max Deviator Stress Deg	Max Deviator Stress c(tsf)	Max Eff Stress Ratio Deg	Max Eff Stress Ratio c(tsf)
Apparent	15.9	0.06	15.5	0.03
Effective	28.9	0.07	29.9	0.07

Remark: REMOLDED AT 3(%) DRY OF OPTIMUM MOISTURE
AND AT 95(%) OF MAXIMUM UNIT WEIGHT.

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW AREA
STATION:
RANGE :

BORING:
EL. :
SAMPLE: CLASS II
DATE : 3-23-87

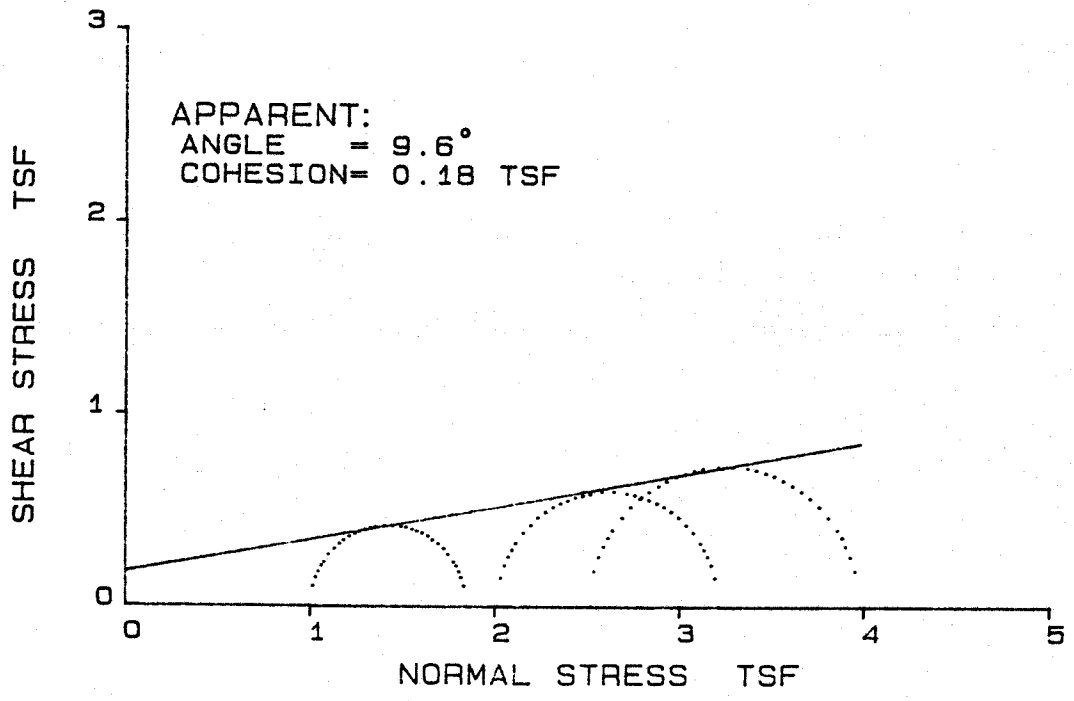


GRAVEL (%)	= 13	D10 (MM)	= 0.0020
SAND (%)	= 40	D30 (MM)	= 0.0144
SILT (%)	= 28	D60 (MM)	= 0.2751
CLAY (%)	= 19	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 27
MOISTURE (%)	= --	P.I. (%)	= 10
SP. GR.	= 2.74		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

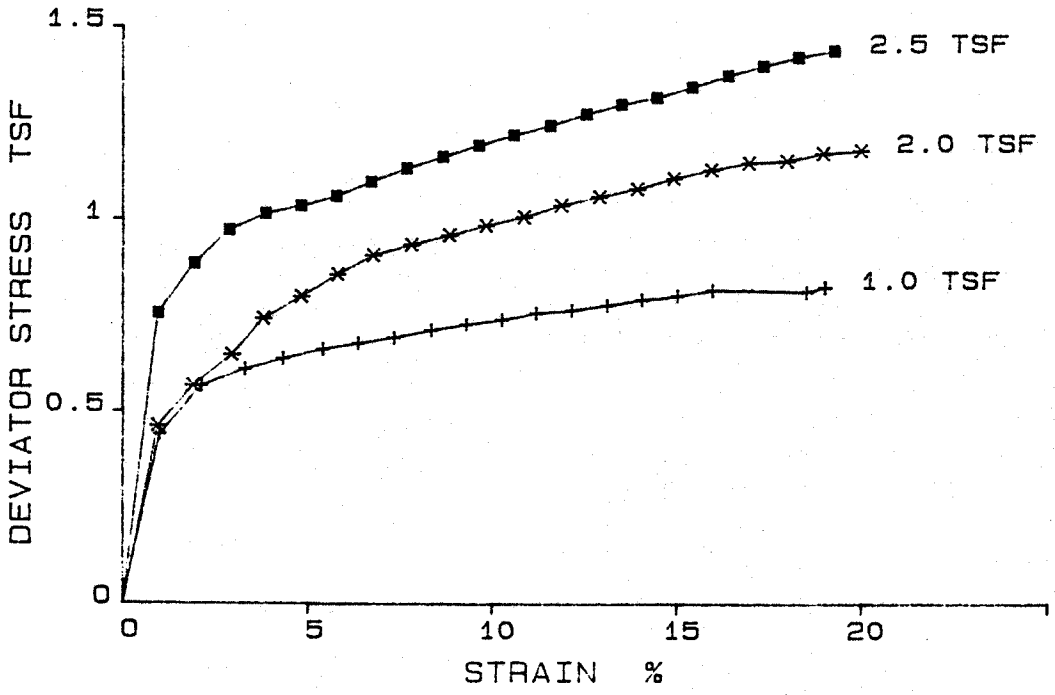
PROJECT:	JOHN SEVIER S.P.	EL.	:
FEATURE:	BORROW AREA	SAMPLE	: CLASS II
STATION:		PART	:
RANGE	:	SOIL SYM:	SC
BORING	:	DATE	: 03-30-87



REMARKS: Remolded at 3% wet of optimum moisture and at 90% of maximum unit weight.

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (Q) TEST

PROJECT:	JOHN SEVIER S.P.	EL.	:
FEATURE:	BORROW AREA	SAMPLE	: CLASS II
STATION:		PART	:
RANGE	:	SOIL SYM:	SC
BORING	:	DATE	: 03-30-87



REMARKS: Remolded at 3% wet of optimum moisture and at 90% of maximum unit weight.

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION(Q) TEST

Project: JOHN SEVIER S.P.
Feature: BORROW AREA
Station:
Range :
Boring :

El. :
Sample: CLASS II
Part :

Tested By : CBE
Computed By: MHD
Checked By : RLV
Report Date: 03-30-87

Soil Symbol= SC
Sp. Gr. = 2.72

L.L.(%)= 27
D10(mm)= 0

P.I.(%) = 10

Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	14.5	14.5	14.4	0.0
Dry Density(pcf)	112.1	112.1	111.8	0.0
Void Ratio	0.515	0.515	0.518	0.000
Saturation(%)	76.7	76.7	75.6	0.0
Before Shearing:				
Moisture(%) (after satur.)	--	--	--	--
Saturation(%)	--	--	--	--
Moisture(%) (after cons.)	--	--	--	--
Void Ratio (after cons.)	--	--	--	--
Final Moisture Content(%)	14.2	14.3	14.1	0.0
Minor Principal Stress(tsf)	1.01	2.02	2.52	0.00
Major Principal Stress(tsf)	1.86	3.22	3.98	0.00
Eff. Minor Prin Stress (tsf)	--	--	--	--
Eff. Major Prin Stress (tsf)	--	--	--	--
Time to Failure(min)	19	20	20	0
Rate of Strain(%/min)	1.01	1.01	0.97	0.00
Specimen Height(in.)	6.31	6.31	6.31	0.00
Specimen Dia (in.)	2.81	2.81	2.81	0.00

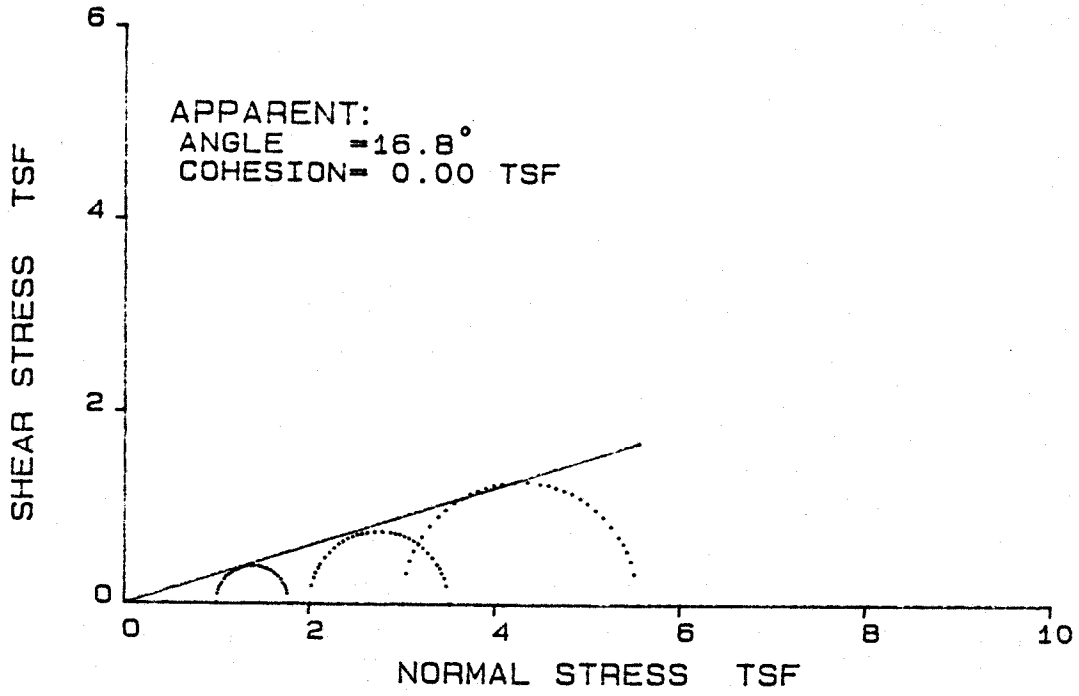
Shear Strength	Max Deviator Stress Deg	Max Deviator Stress c(tsf)	Max Eff Deg	Stress Ratio c(tsf)
Apparent	9.6	0.18		
Effective	--	--		

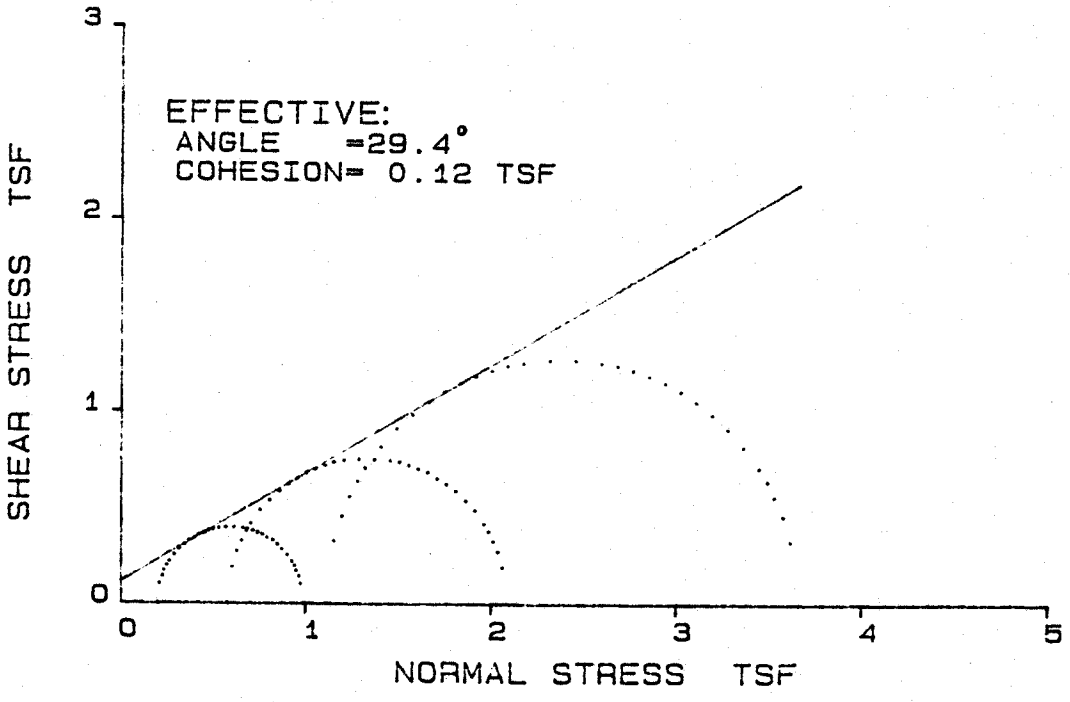
Remark: Remolded at 3% wet of optimum moisture and at 90% of maximum unit weight.

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW AREA
STATION:
RANGE :
BORING :

EL. :
SAMPLE : CLASS II
PART :
SOIL SYM: SC
DATE : 03-30-87

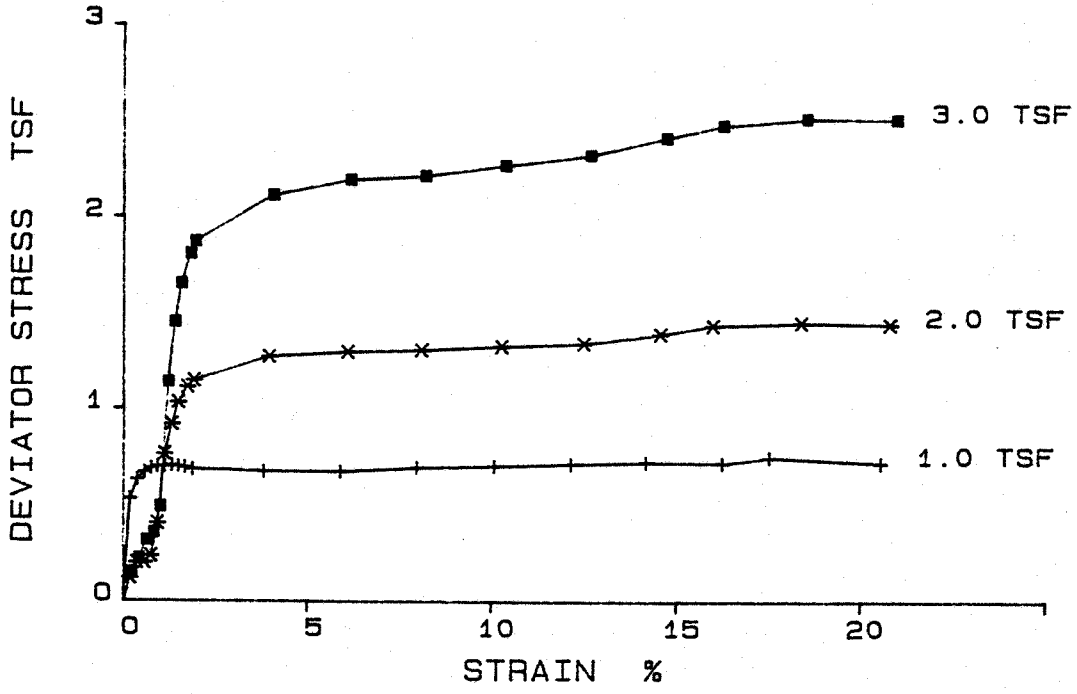


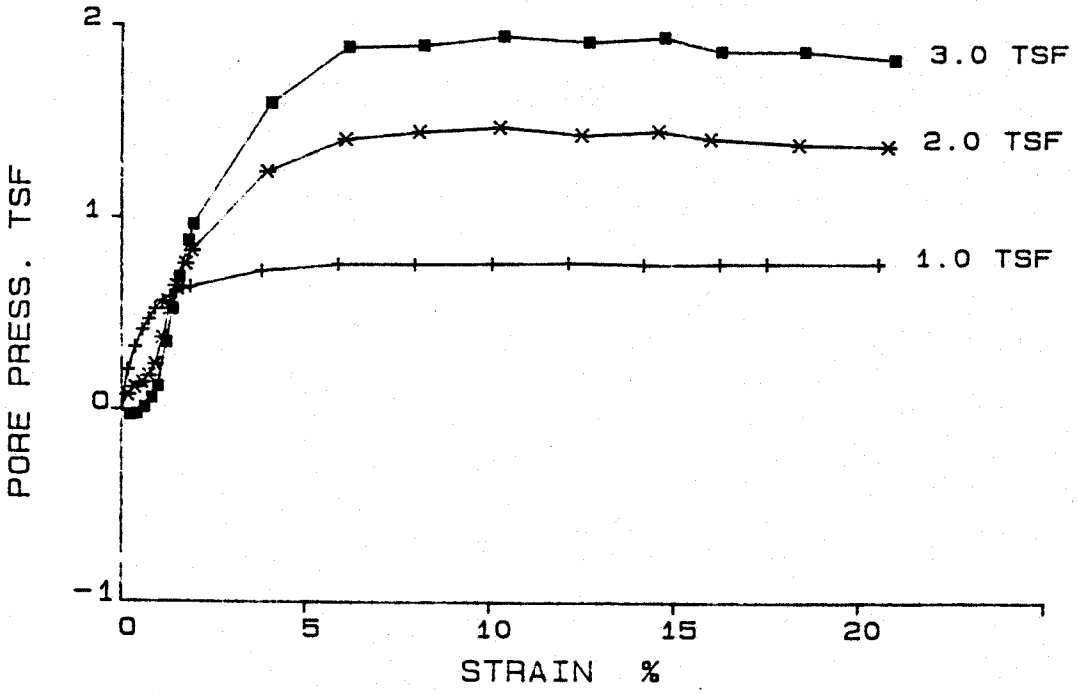


REMARKS: REMOLDED AT 3% DRY OF OPTIMUM MOISTURE AND AT 90% OF MAXIMUM UNIT WEIGHT.

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (R) TEST

PROJECT:	JOHN SEVIER S.P.	EL.	:
FEATURE:	BORROW AREA	SAMPLE	: CLASS II
STATION:		PART	:
RANGE	:	SOIL SYM:	SC
BORING	:	DATE	: 03-30-87





REMARKS: REMOLDED AT 3% DRY OF OPTIMUM MOISTURE AND AT 90% OF MAXIMUM UNIT WEIGHT.

Tennessee Valley Authority
Singleton Materials Engineering Laboratory
Consolidated Undrained Triaxial Compression (R) Test

Project: JOHN SEVIER S.P.
Feature: BORROW AREA
Station:
Range :
Boring :

El. :
Sample: CLASS II
Part :

Tested By : TAL
Computed By: MHD
Checked By : CEL
Report Date: 03-30-87

Soil Symbol= SC
Sp. Gr. = 2.72

L.L.(%)= 27
D10(mm)= 0

P.I.(%) = 10

Specimen Number	1	2	3	4
Initial:				
Moisture Content(%)	8.4	8.5	8.5	0.0
Dry Density(pcf)	112.1	111.8	111.8	0.0
Void Ratio	0.515	0.519	0.519	0.000
Saturation(%)	44.1	44.7	44.6	0.0
Before Shearing:				
Moisture(%) (after satur.)	18.9	19.1	19.1	0.0
Saturation(%)	100.0	100.0	100.0	0.0
Moisture(%) (after cons.)	17.6	17.2	16.2	0.0
Void Ratio (after cons.)	0.480	0.469	0.440	0.000
Final Moisture Content(%)	15.4	14.6	13.7	0.0
Minor Principal Stress(tsf)	1.01(1.01)	2.02(2.02)	3.02(3.02)	0.00(0.00)
Major Principal Stress(tsf)	1.80(1.80)	3.53(3.46)	5.58(5.47)	0.00(0.00)
Eff. Minor Prin Stress(tsf)	0.20(0.20)	0.58(0.52)	1.12(1.04)	0.00(0.00)
Eff. Major Prin Stress(tsf)	0.99(0.99)	2.10(1.97)	3.67(3.49)	0.00(0.00)
Time to Failure(min)	90	90	90	0
Rate of Strain(%/min)	0.20	0.21	0.21	0.00
Specimen Height(in.)	6.31	6.31	6.31	0.00
Specimen Dia (in.)	2.81	2.81	2.81	0.00

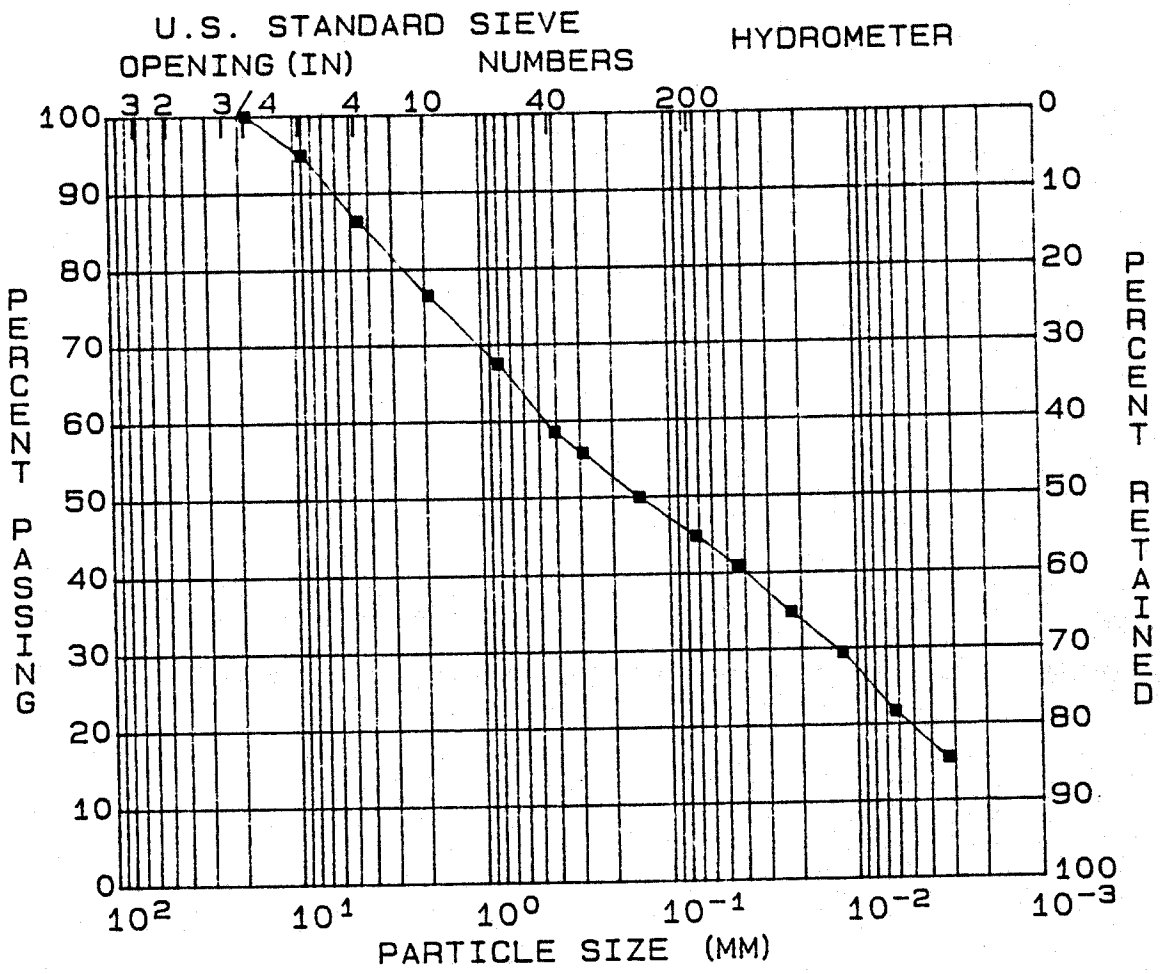
Shear Strength	Max Deviator Stress Deg	Max Deviator Stress c(tsf)	Max Eff Deg	Stress Ratio c(tsf)
Apparent	16.8	0.00	17.0	-0.04
Effective	29.4	0.12	29.7	0.12

Remark: REMOLDED AT 3% DRY OF OPTIMUM MOISTURE
AND AT 90% OF MAXIMUM UNIT WEIGHT.

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: PAH-5 16 25 34
EL. :
SAMPLE: 1
DATE : 03-02-87



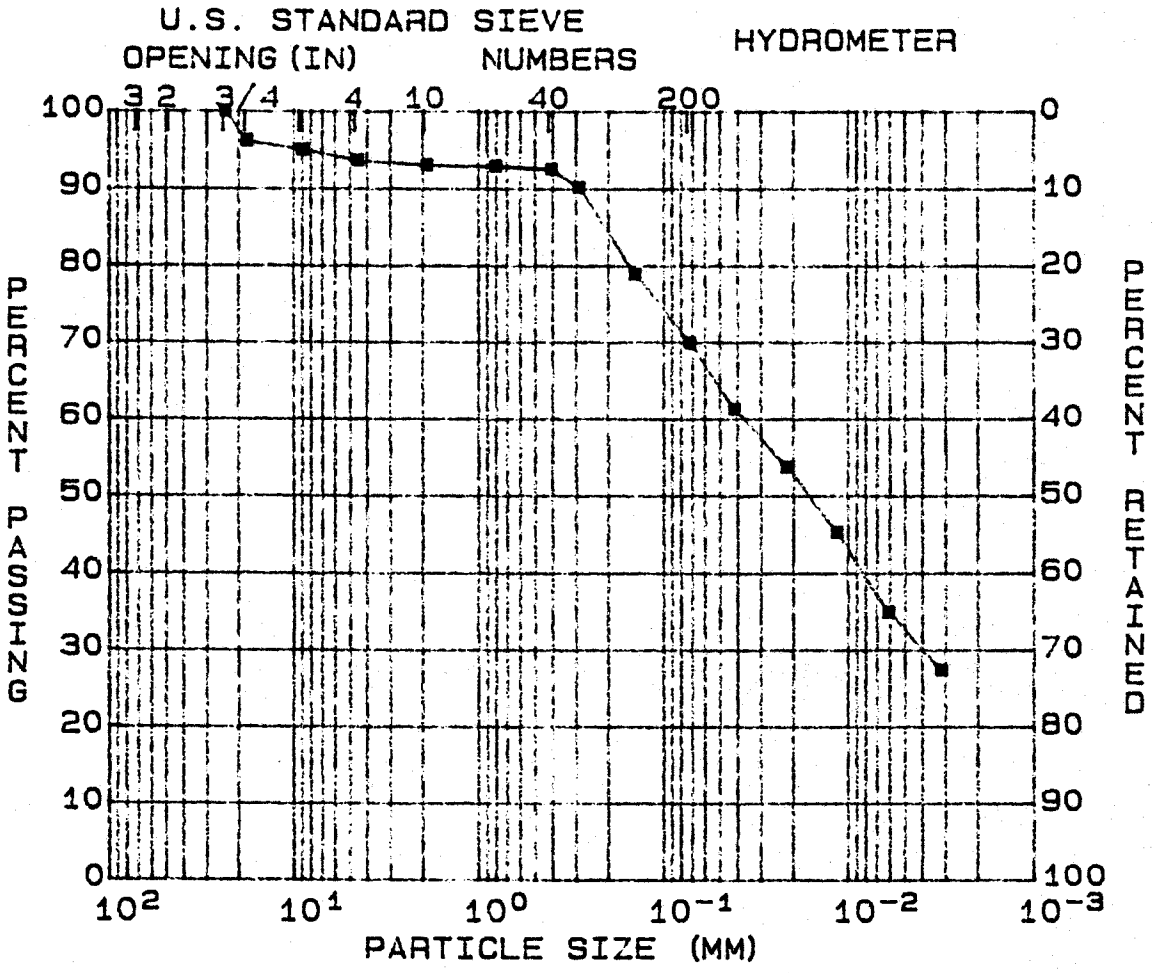
GRAVEL (%)	= 13	D10 (MM)	= 0.0018
SAND (%)	= 42	D30 (MM)	= 0.0128
SILT (%)	= 26	D60 (MM)	= 0.4565
CLAY (%)	= 19	COEF UNIF>	100
SOIL SYMBOL=	SC	L.L. (%)	= 27
MOISTURE (%) =	--	P.I. (%)	= 10
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: PAH-5 16 25 34
EL. :
SAMPLE: GR.2
DATE : 02-27-87



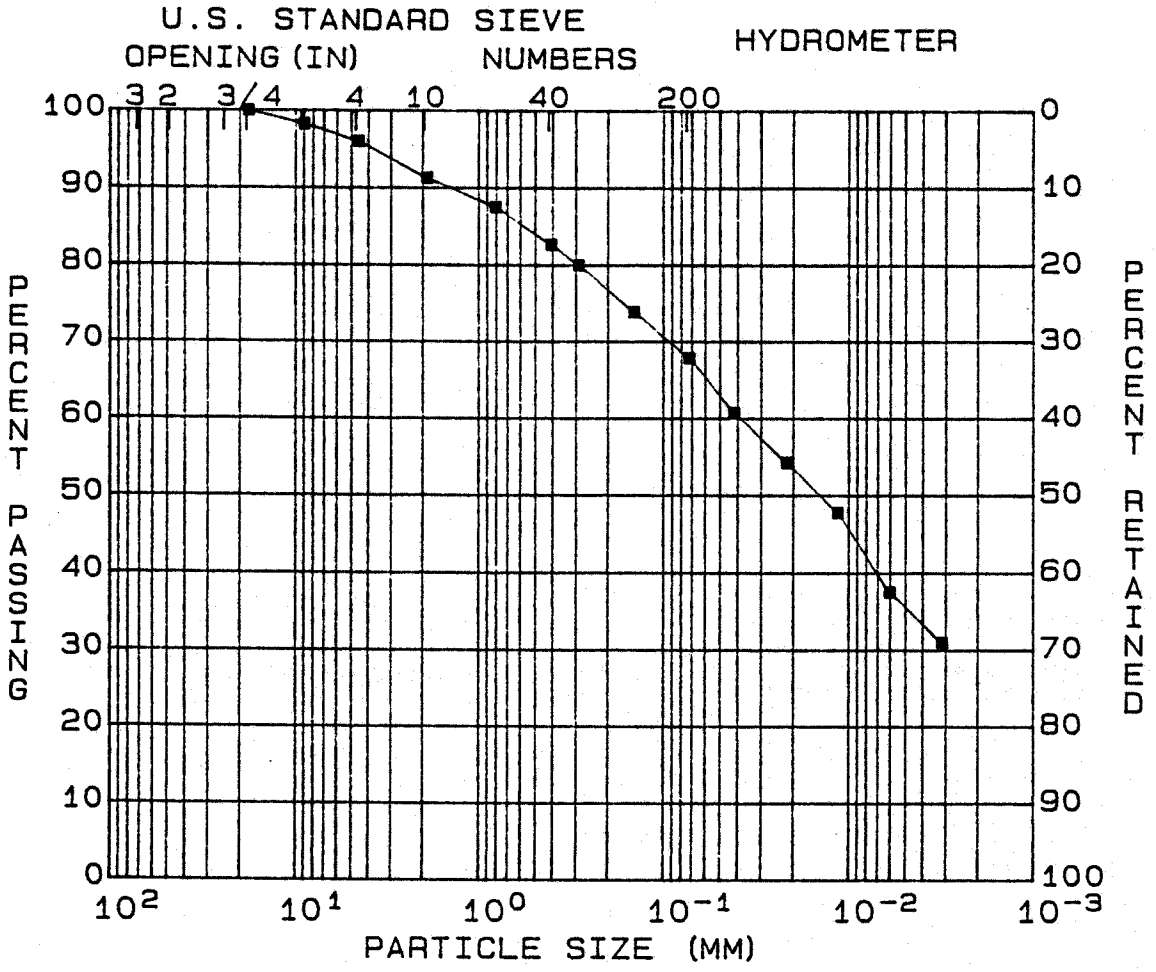
GRAVEL (%)	= 6	D10 (MM)	= --
SAND (%)	= 24	D30 (MM)	= --
SILT (%)	= 38	D60 (MM)	= --
CLAY (%)	= 32	COEF UNIF	= --
SOIL SYMBOL	= CL	L.L. (%)	= 30
MOISTURE (%)	= --	P.I. (%)	= 14
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: PAH-5 16 25 34
EL. :
SAMPLE: GR.3
DATE : 03-02-87



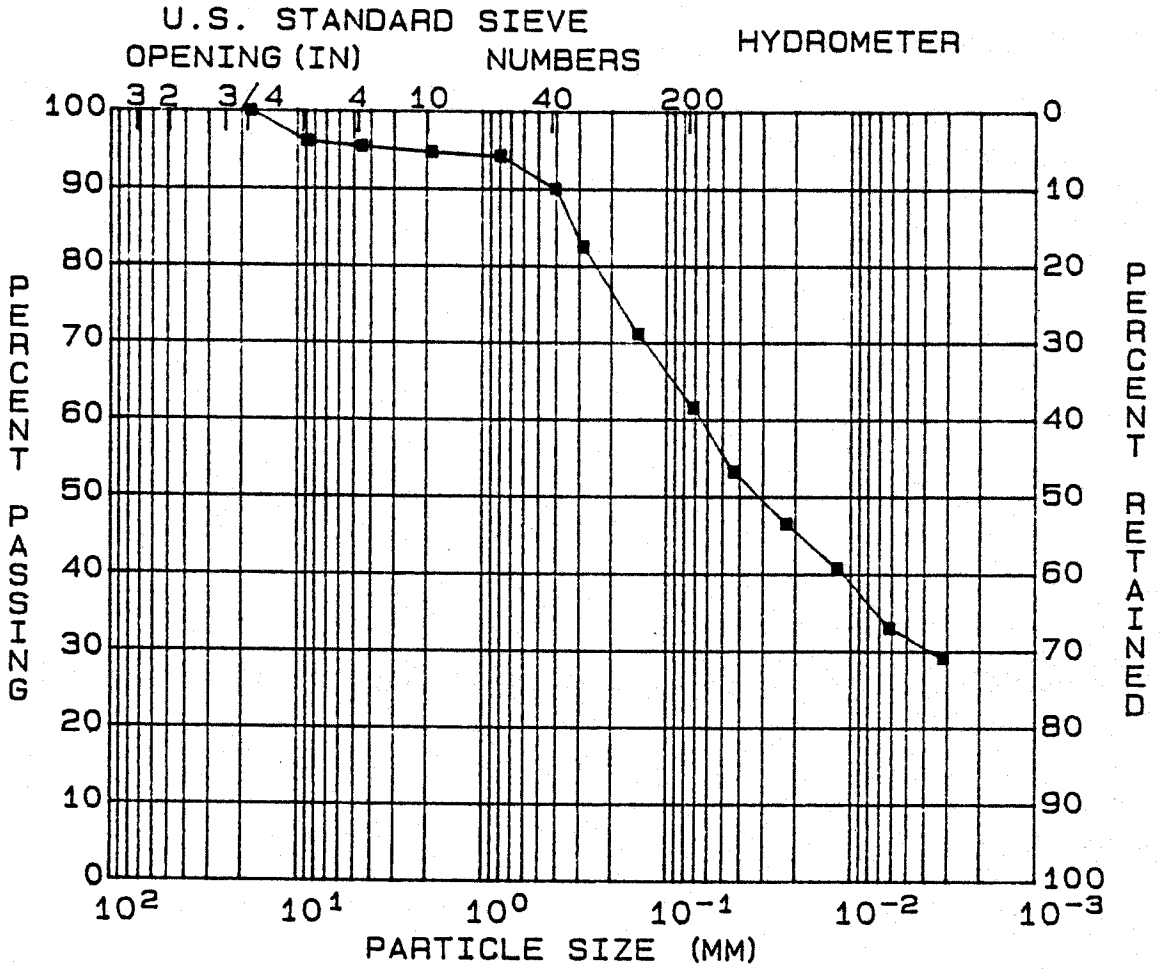
GRAVEL (%)	= 3	D10 (MM)	= --
SAND (%)	= 28	D30 (MM)	= --
SILT (%)	= 33	D60 (MM)	= --
CLAY (%)	= 36	COEF UNIF	= --
SOIL SYMBOL	= CL	L.L. (%)	= 37
MOISTURE (%)	= --	P.I. (%)	= 17
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: PAH-5 16 25 34
EL. :
SAMPLE: GR.4
DATE : 03-02-87



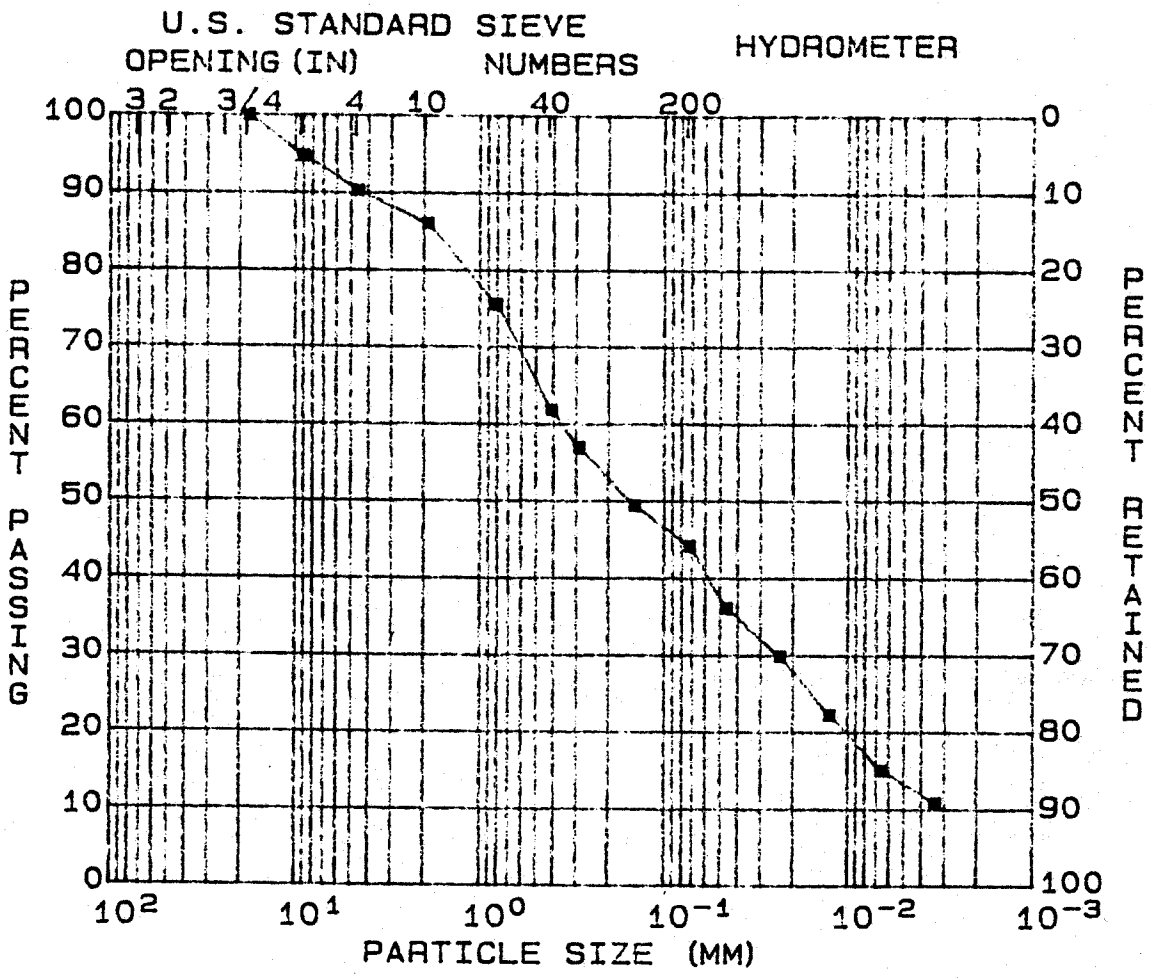
GRAVEL (%)	= 4	D10 (MM)	= --
SAND (%)	= 34	D30 (MM)	= --
SILT (%)	= 30	D60 (MM)	= --
CLAY (%)	= 32	COEF UNIF	= --
SOIL SYMBOL	= CL	L.L. (%)	= 31
MOISTURE (%)	= --	P.I. (%)	= 16
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.1
DATE : 2/26/87



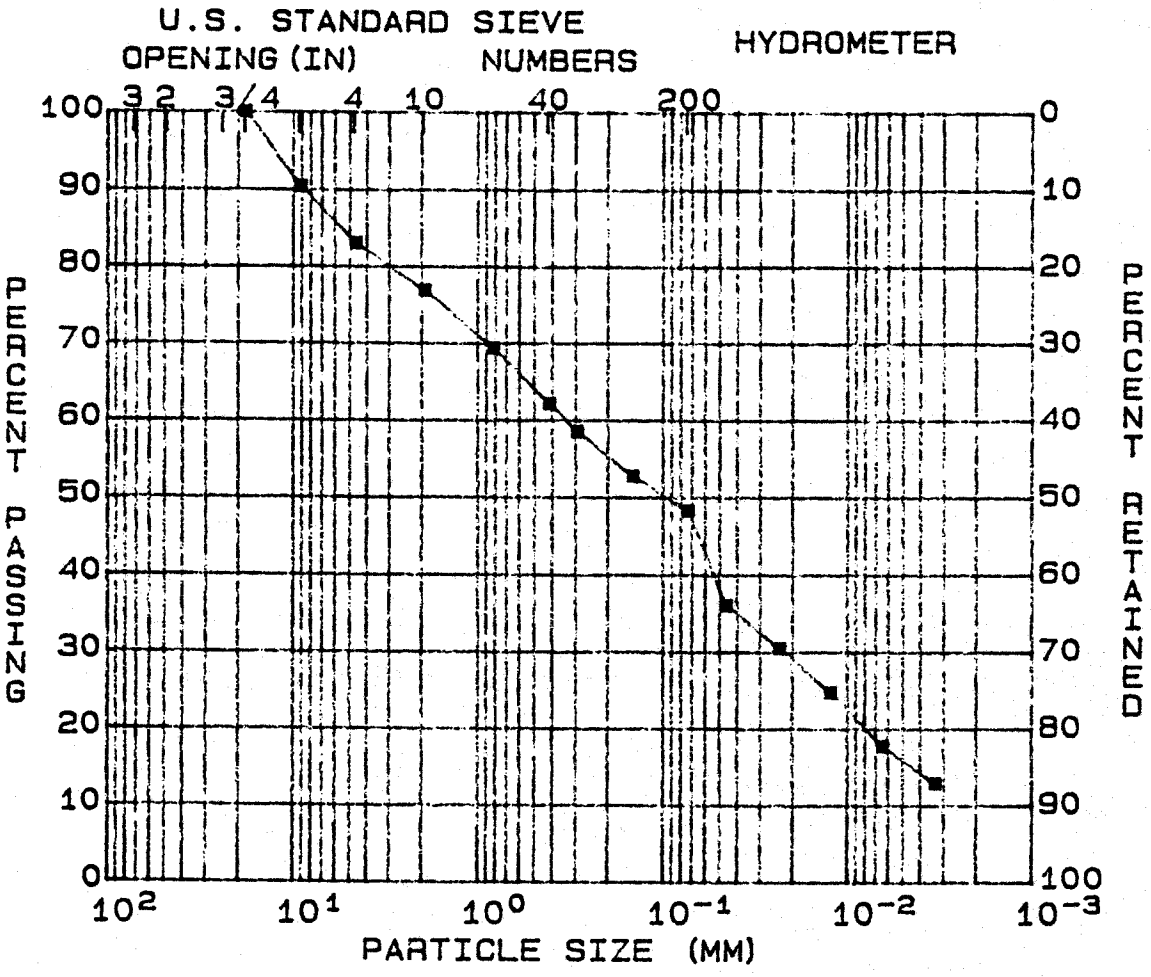
GRAVEL (%)	= 9	D10 (MM)	= 0.0029
SAND (%)	= 46	D30 (MM)	= 0.0238
SILT (%)	= 31	D60 (MM)	= 0.3608
CLAY (%)	= 14	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 33
MOISTURE (%)	= --	P.I. (%)	= 11
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.2
DATE : 02-26-87



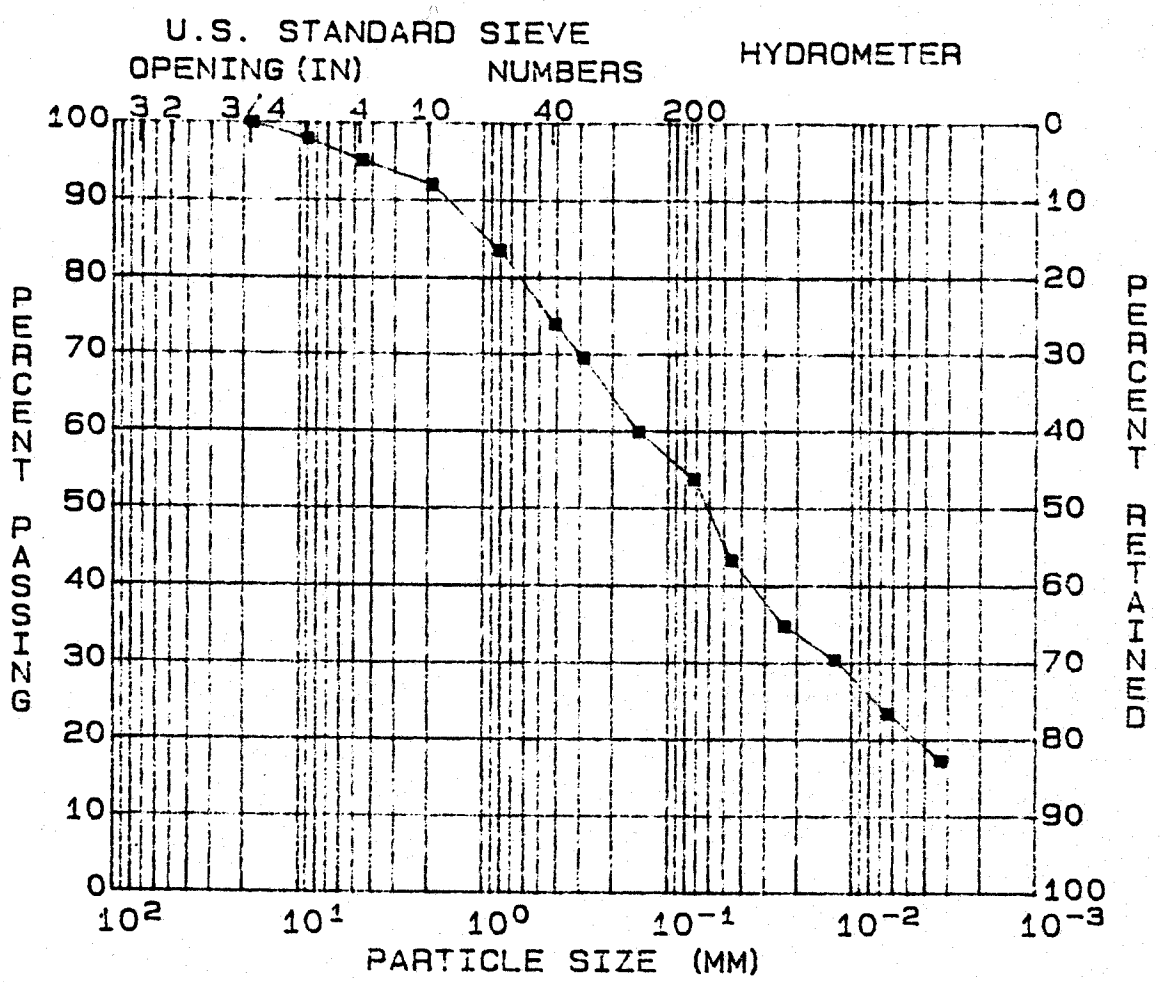
GRAVEL (%)	= 16	D10 (MM)	= 0.0022
SAND (%)	= 35	D30 (MM)	= 0.0220
SILT (%)	= 33	D60 (MM)	= 0.3313
CLAY (%)	= 16	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 39
MOISTURE (%)	= --	P.I. (%)	= 15
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.3
DATE : 03-02-87



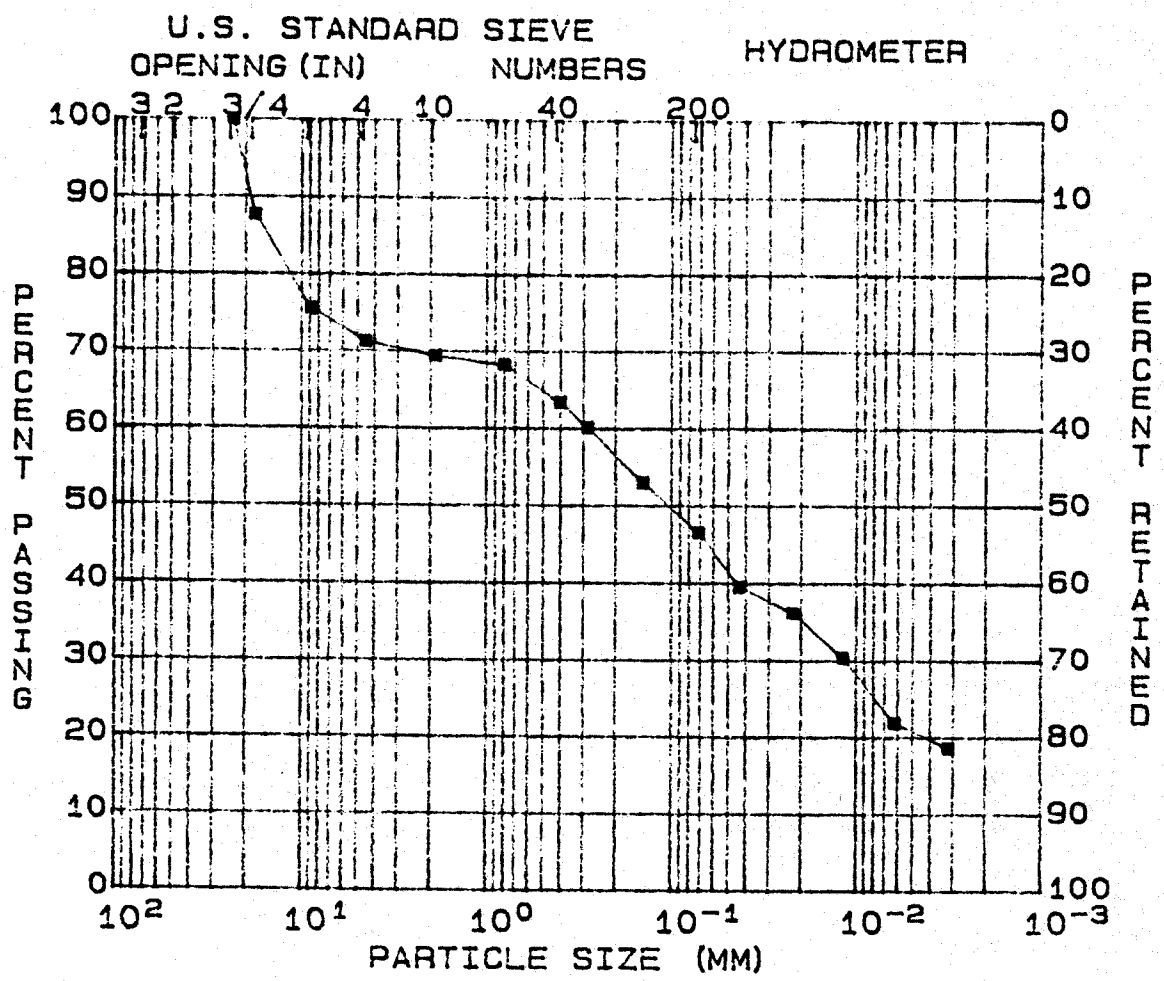
GRAVEL (%)	= 4	D10 (MM)	= --
SAND (%)	= 42	D30 (MM)	= --
SILT (%)	= 33	D60 (MM)	= --
CLAY (%)	= 21	COEF UNIF	= --
SOIL SYMBOL	= ML/CL	L.L. (%)	= 43
MOISTURE (%)	= --	P.I. (%)	= 16
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.4
DATE : 02-26-87



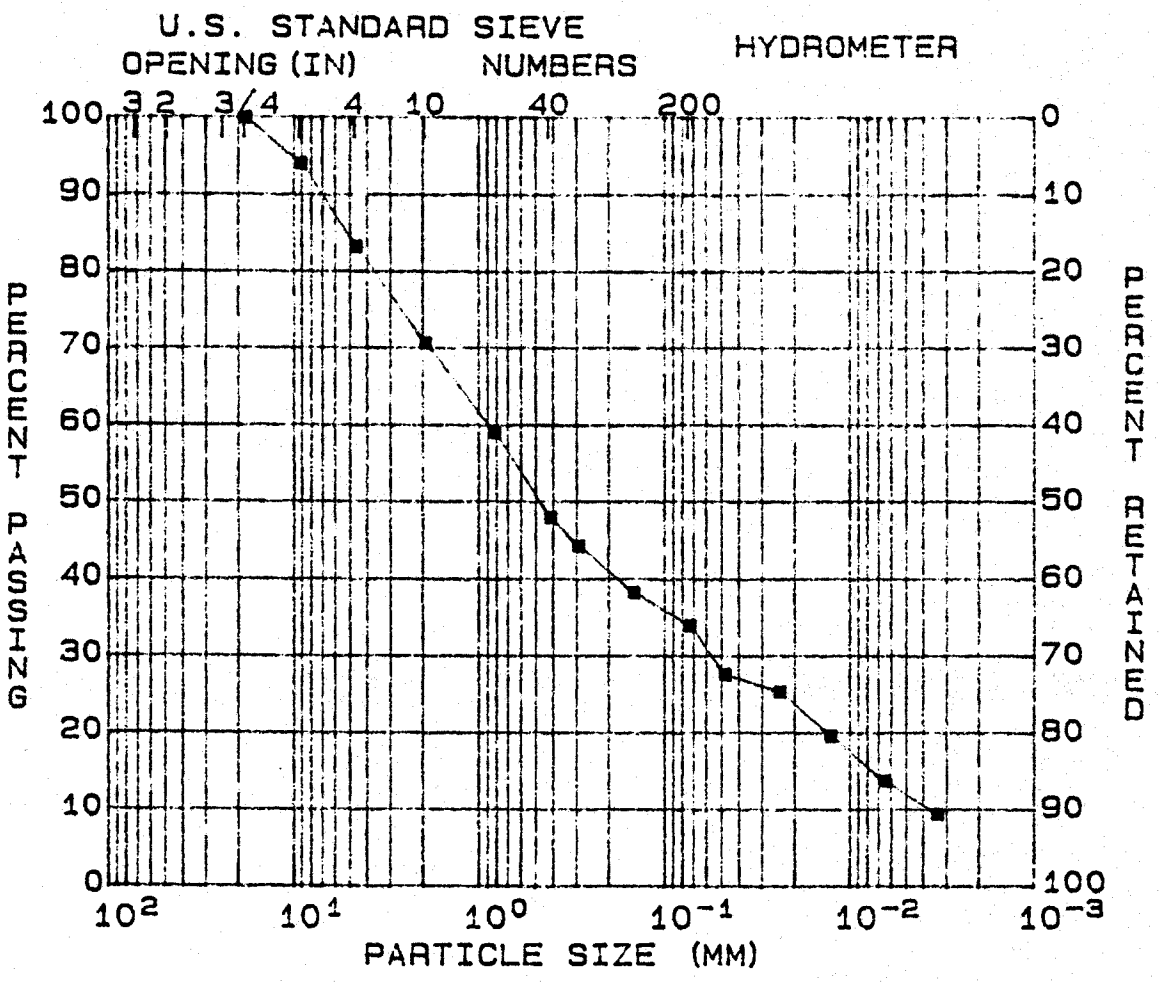
GRAVEL (%)	= 28	D10 (MM)	= 0.0005
SAND (%)	= 25	D30 (MM)	= 0.0117
SILT (%)	= 26	D60 (MM)	= 0.2856
CLAY (%)	= 21	COEF UNIF>	100
SOIL SYMBOL	= GC	L.L. (%)	= 33
MOISTURE (%)	= --	P.I. (%)	= 14
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.5
DATE : 02-26-87



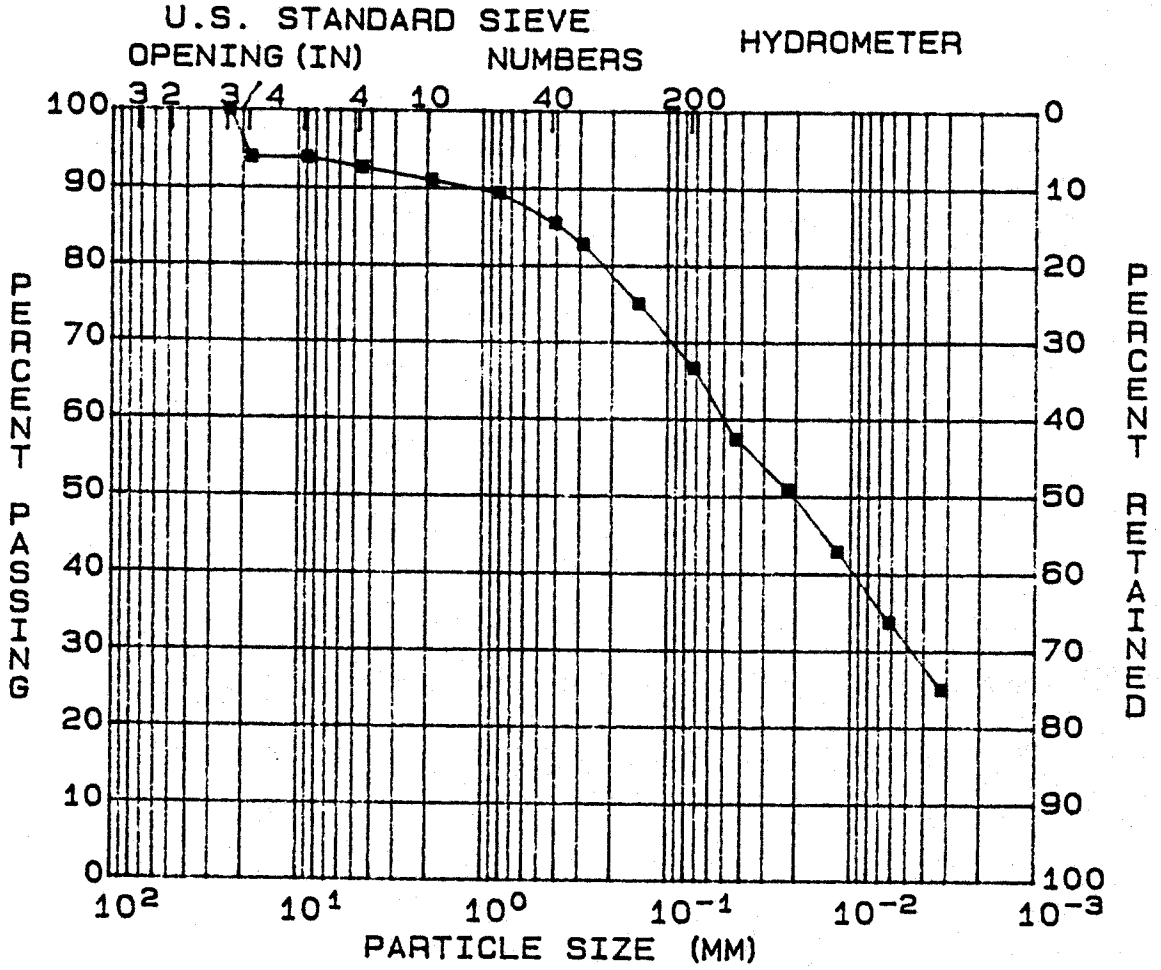
GRAVEL (%)	= 16	D10 (MM)	= 0.0036
SAND (%)	= 50	D30 (MM)	= 0.0552
SILT (%)	= 22	D60 (MM)	= 0.8705
CLAY (%)	= 12	COEF UNIF>	100
SOIL SYMBOL	= SC/SM	L.L. (%)	= 41
MOISTURE (%)	= --	P.I. (%)	= 14
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.6
DATE : 02-26-87



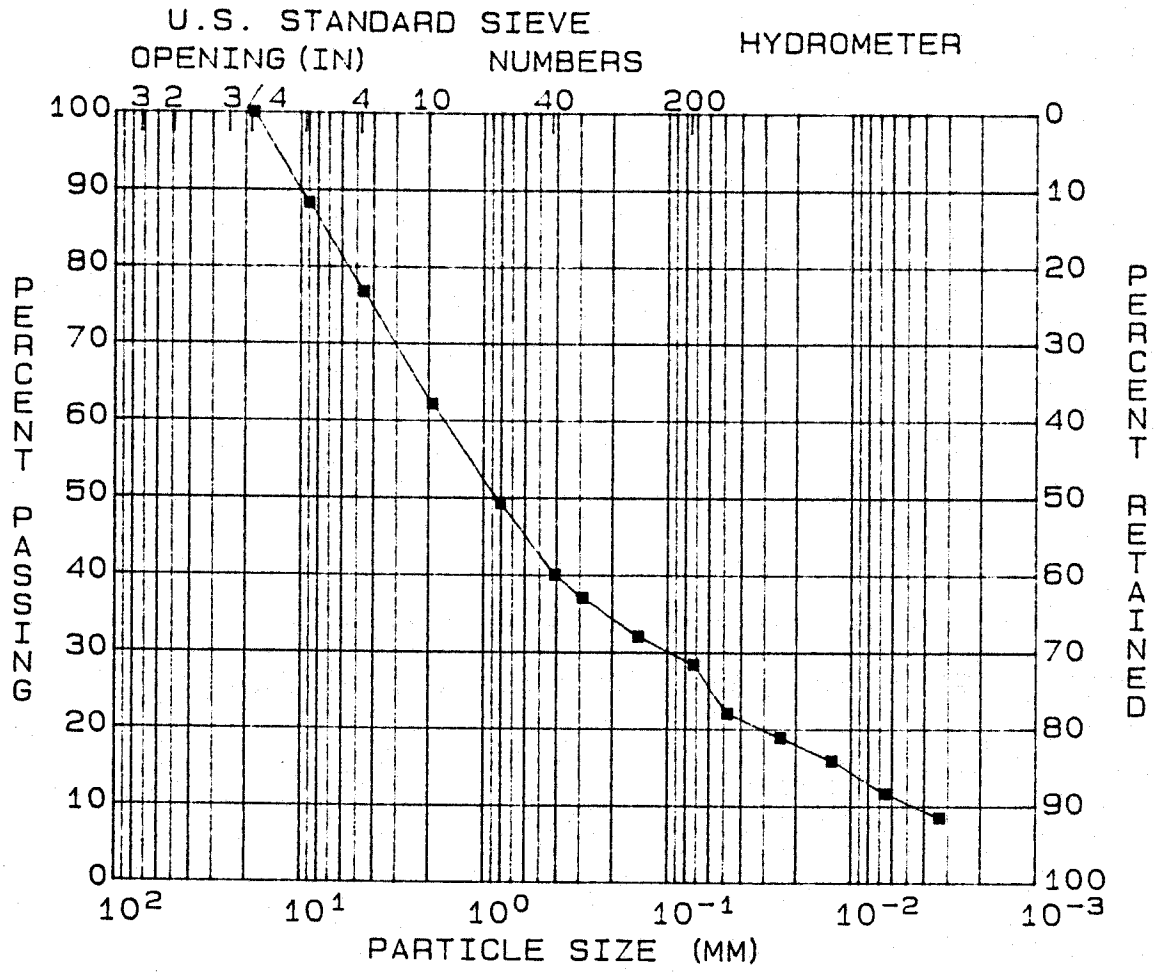
GRAVEL (%)	= 7	D10 (MM)	= --
SAND (%)	= 26	D30 (MM)	= --
SILT (%)	= 36	D60 (MM)	= --
CLAY (%)	= 31	COEF UNIF	= --
SOIL SYMBOL	= CL	L.L. (%)	= 33
MOISTURE (%)	= --	P.I. (%)	= 15
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.7
DATE : 03-19-87



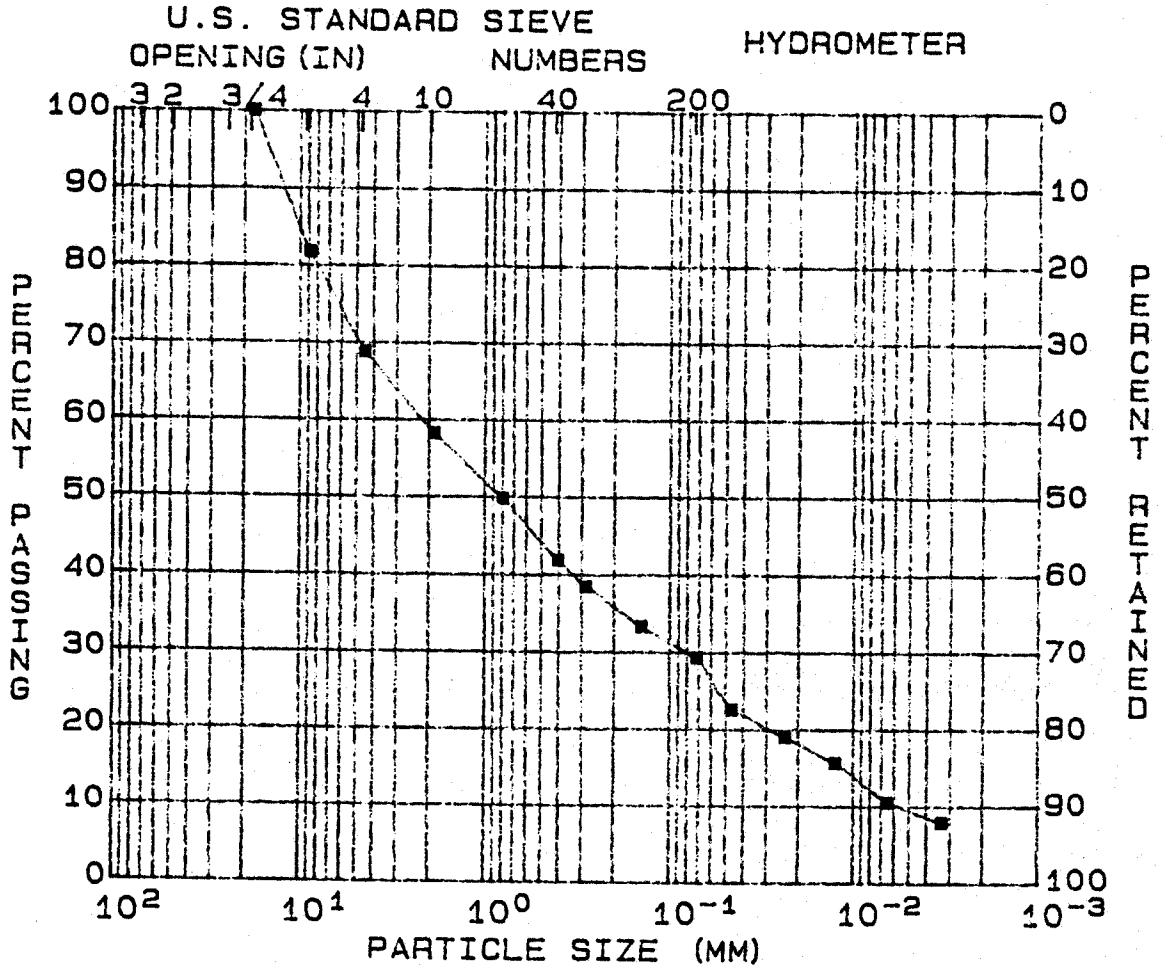
GRAVEL (%)	= 23	D10 (MM)	= 0.0045
SAND (%)	= 49	D30 (MM)	= 0.0953
SILT (%)	= 18	D60 (MM)	= 1.6603
CLAY (%)	= 10	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 28
MOISTURE (%)	= --	P.I. (%)	= 9
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.8
DATE : 03-02-87



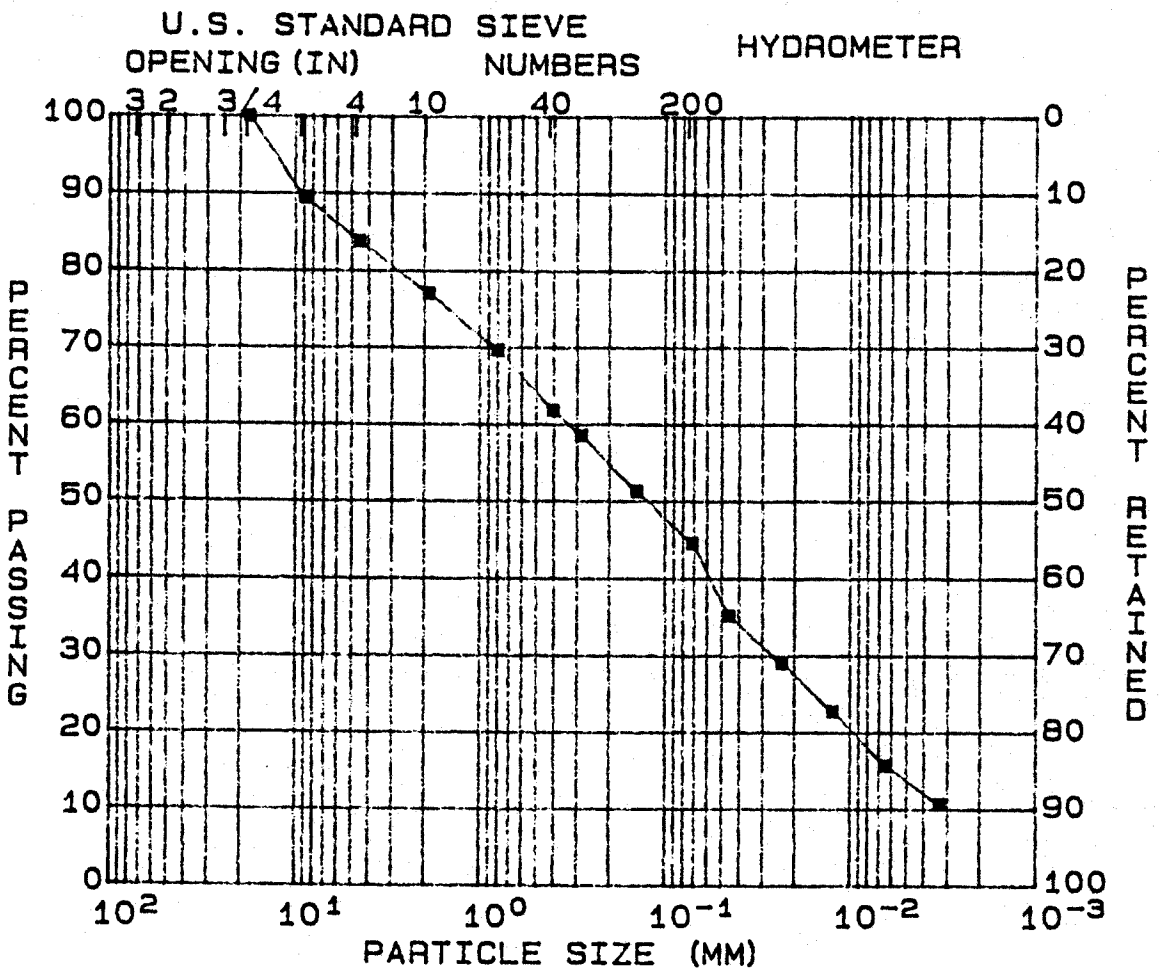
GRAVEL (%)	= 31	D10 (MM)	= 0.0027
SAND (%)	= 40	D30 (MM)	= 0.0816
SILT (%)	= 20	D60 (MM)	= 2.2318
CLAY (%)	= 9	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 30
MOISTURE (%)	= --	P.I. (%)	= 10
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.9
DATE : 3-2-87



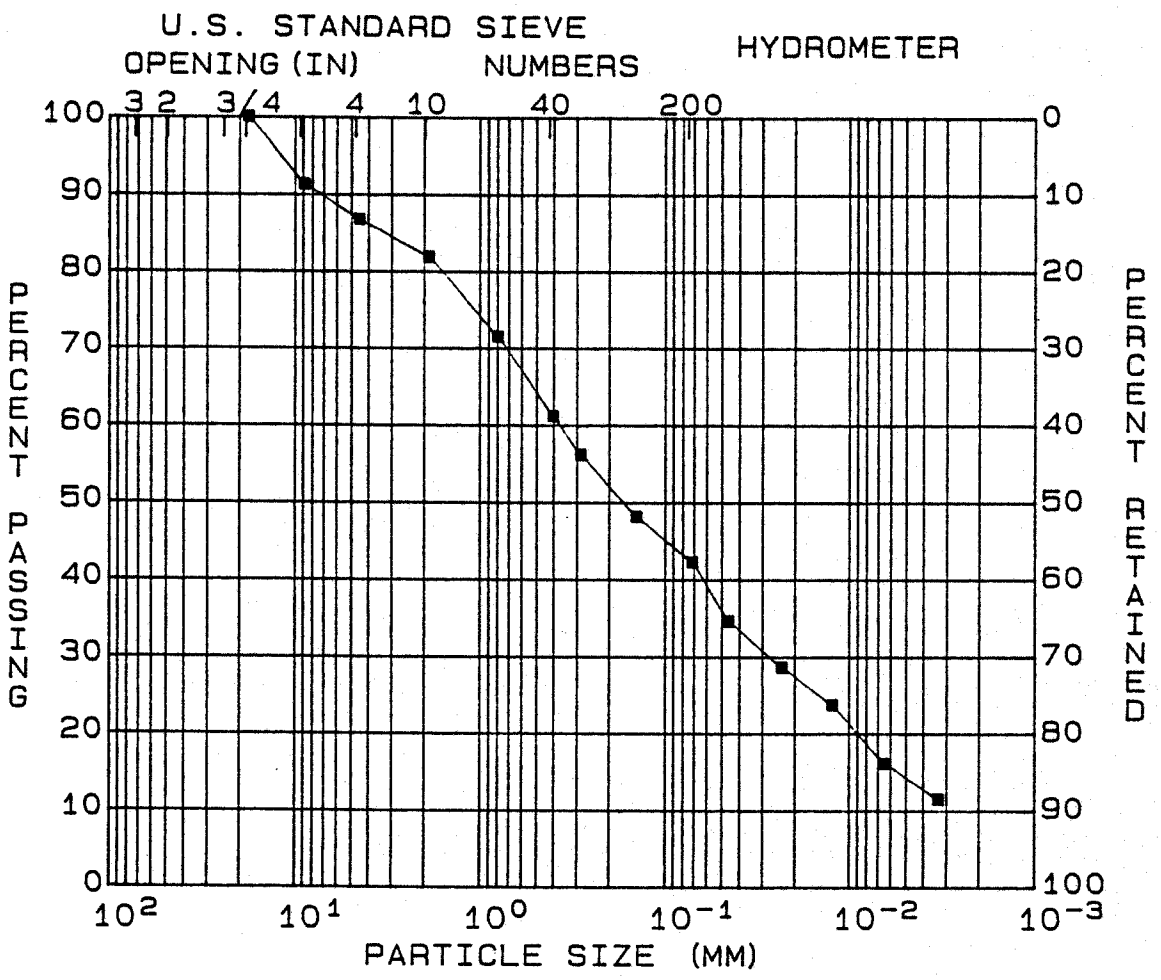
GRAVEL (%)	= 15	D10 (MM)	= 0.0030
SAND (%)	= 40	D30 (MM)	= 0.0260
SILT (%)	= 31	D60 (MM)	= 0.3296
CLAY (%)	= 14	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 30
MOISTURE (%)	= --	P.I. (%)	= 11
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.10
DATE : 03-02-87



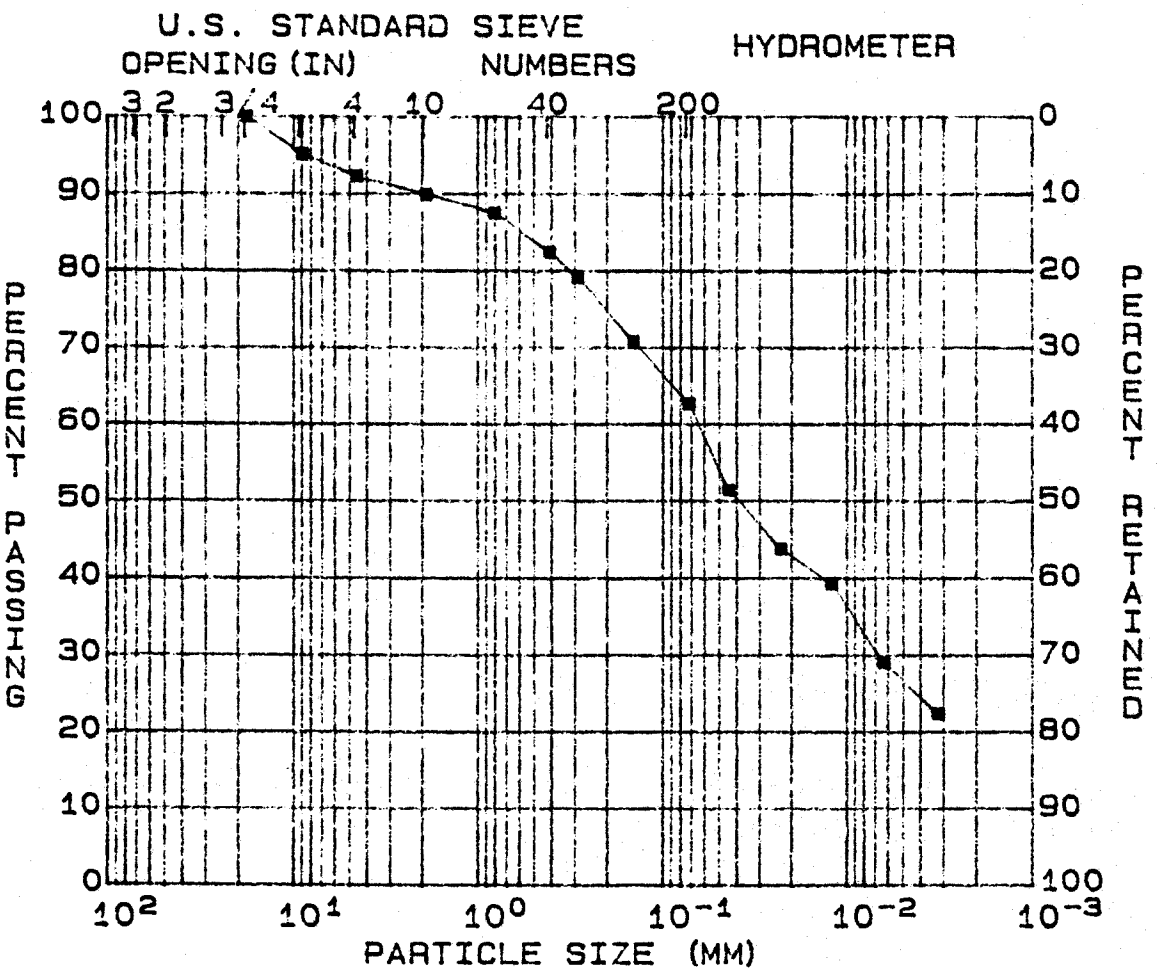
GRAVEL (%)	= 12	D10 (MM)	= 0.0027
SAND (%)	= 45	D30 (MM)	= 0.0278
SILT (%)	= 28	D60 (MM)	= 0.3797
CLAY (%)	= 15	COEF UNIF>	100
SOIL SYMBOL	= SC/SM	L.L. (%)	= 42
MOISTURE (%)	= --	P.I. (%)	= 16
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.11
DATE : 02-26-87



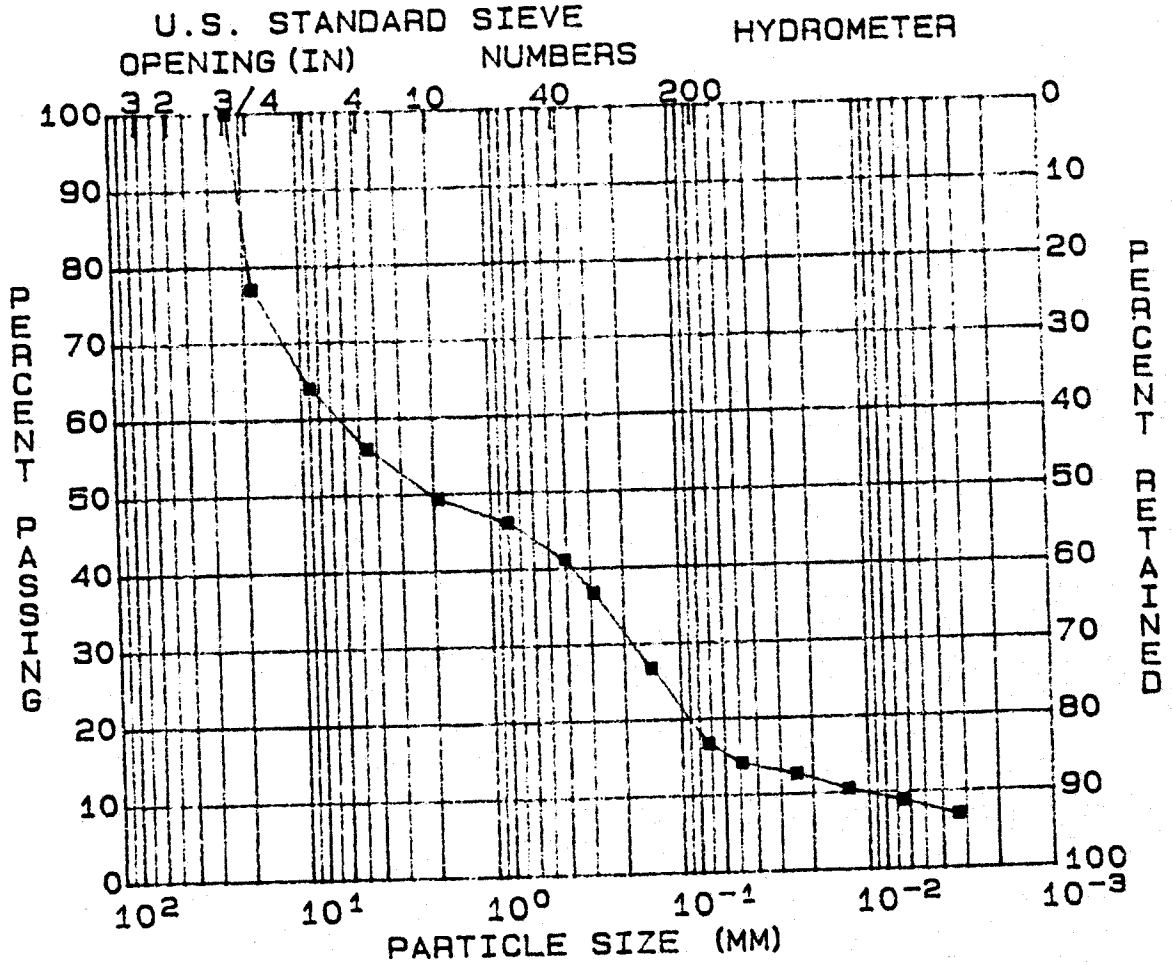
GRAVEL (%)	= 7	D10 (MM)	= --
SAND (%)	= 30	D30 (MM)	= --
SILT (%)	= 36	D60 (MM)	= --
CLAY (%)	= 27	COEF UNIF	= --
SOIL SYMBOL	= CL	L.L. (%)	= 35
MOISTURE (%)	= --	P.I. (%)	= 16
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.12
DATE : 02-26-87



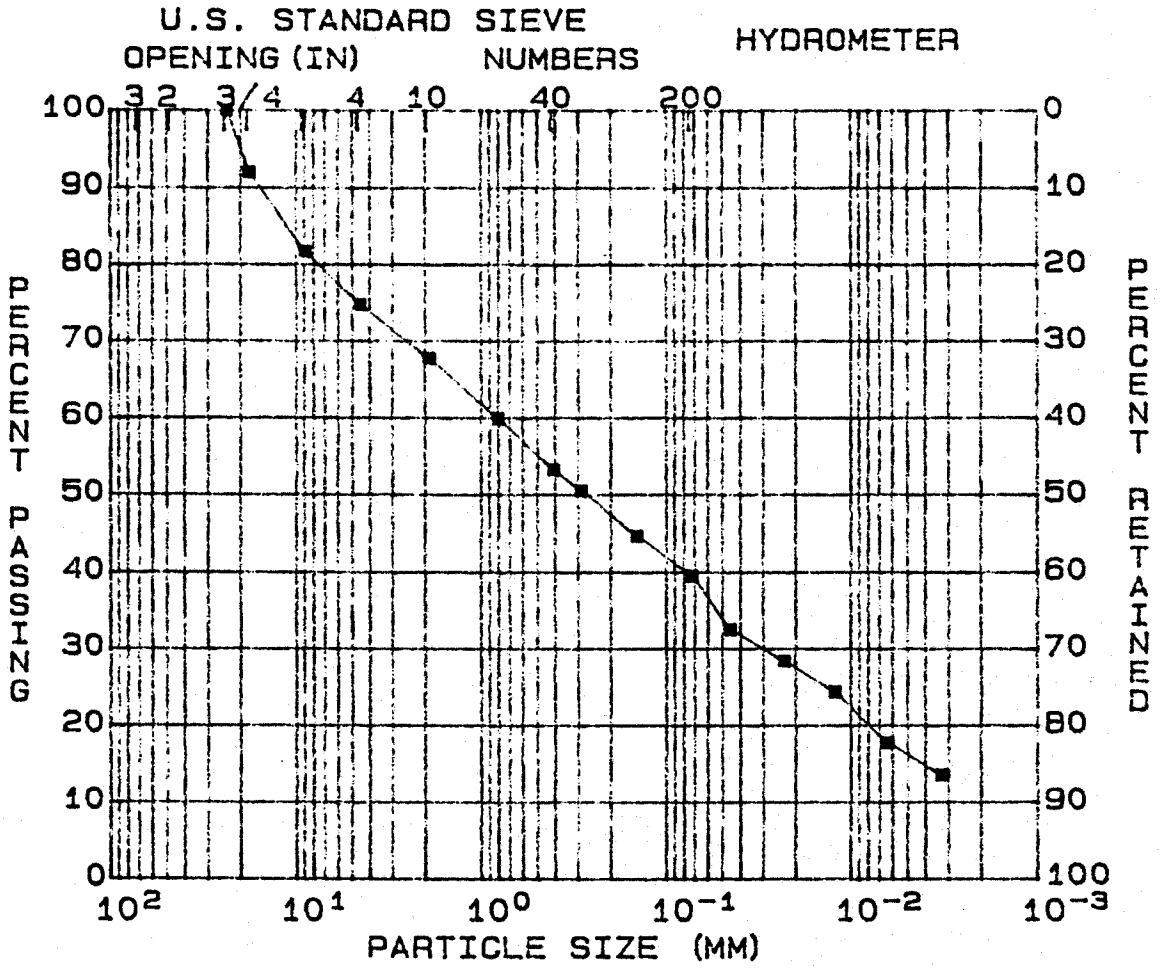
GRAVEL (%)	= 43	D10 (MM)	= 0.0101
SAND (%)	= 40	D30 (MM)	= 0.1847
SILT (%)	= 9	D60 (MM)	= 6.3924
CLAY (%)	= 8	COEF UNIF>	100
SOIL SYMBOL	= GM	L.L. (%)	= NP
MOISUTRE (%)	= --	P.I. (%)	= NP
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.13
DATE : 02-26-87



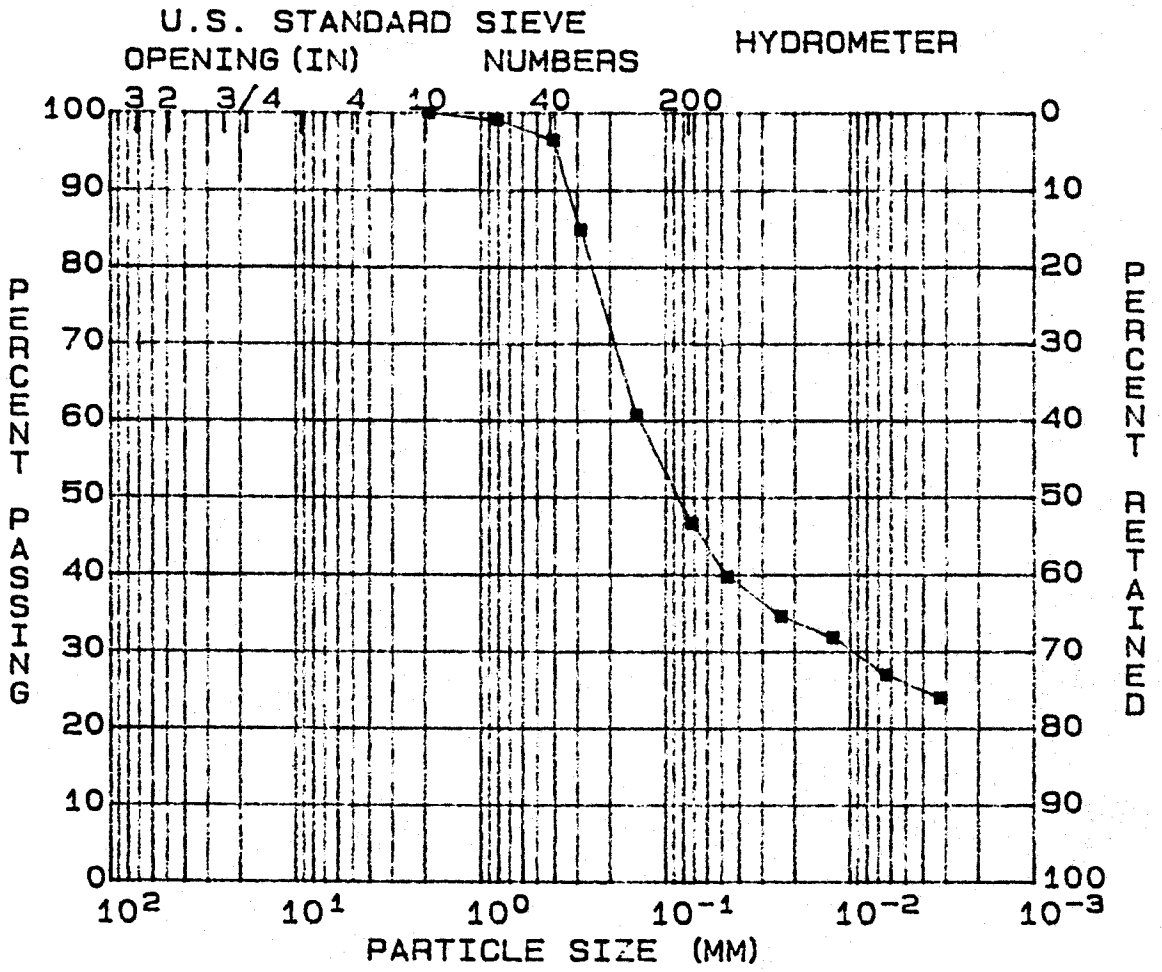
GRAVEL (%)	= 25	D10 (MM)	= 0.0019
SAND (%)	= 36	D30 (MM)	= 0.0299
SILT (%)	= 24	D60 (MM)	= 0.8093
CLAY (%)	= 15	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 30
MOISTURE (%)	= --	P.I. (%)	= 13
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.14
DATE : 02-26-87



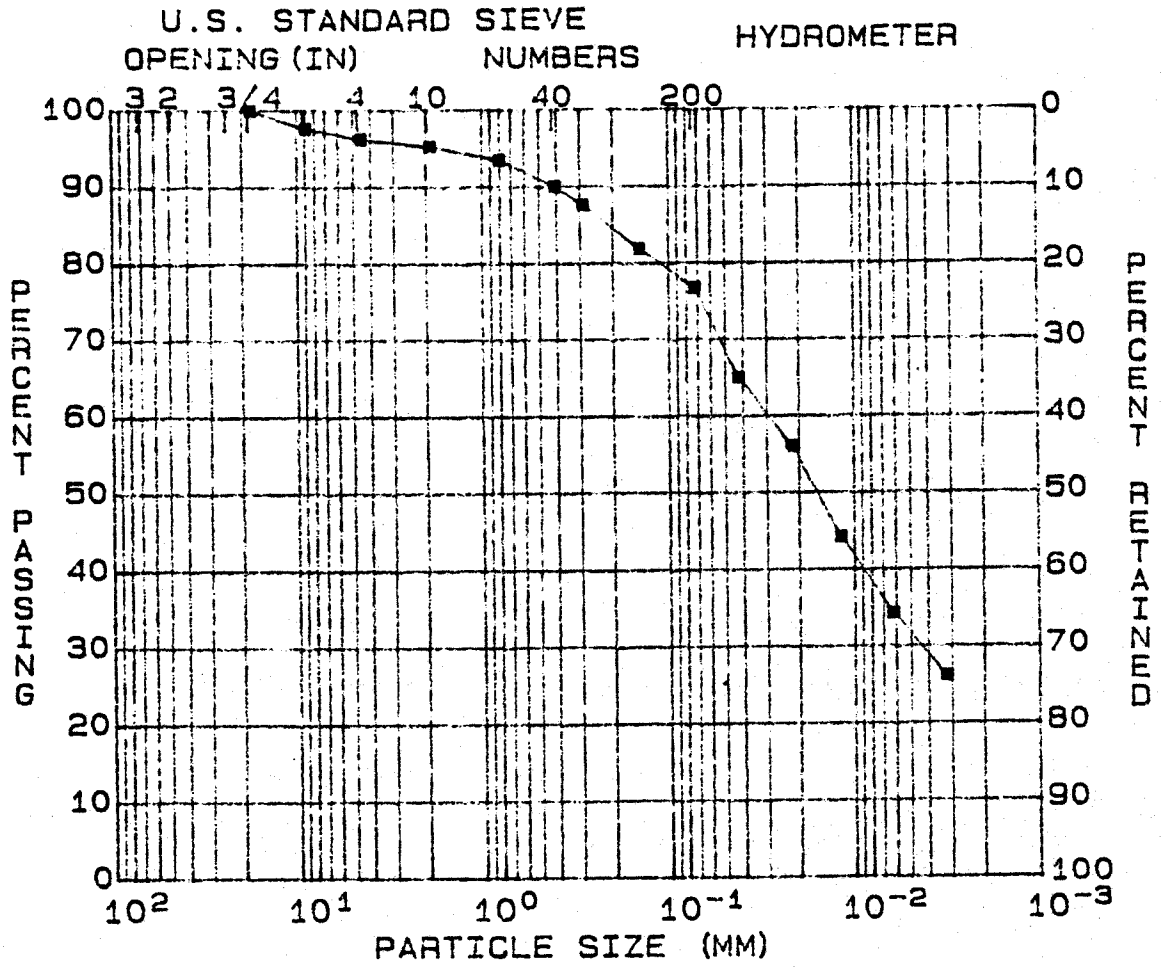
GRAVEL (%)	= 0	D10 (MM)	= 0.0001
SAND (%)	= 53	D30 (MM)	= 0.0096
SILT (%)	= 21	D60 (MM)	= 0.1415
CLAY (%)	= 26	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 31
MOISTURE (%)	= --	P.I. (%)	= 15
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.15
DATE : 02-26-87



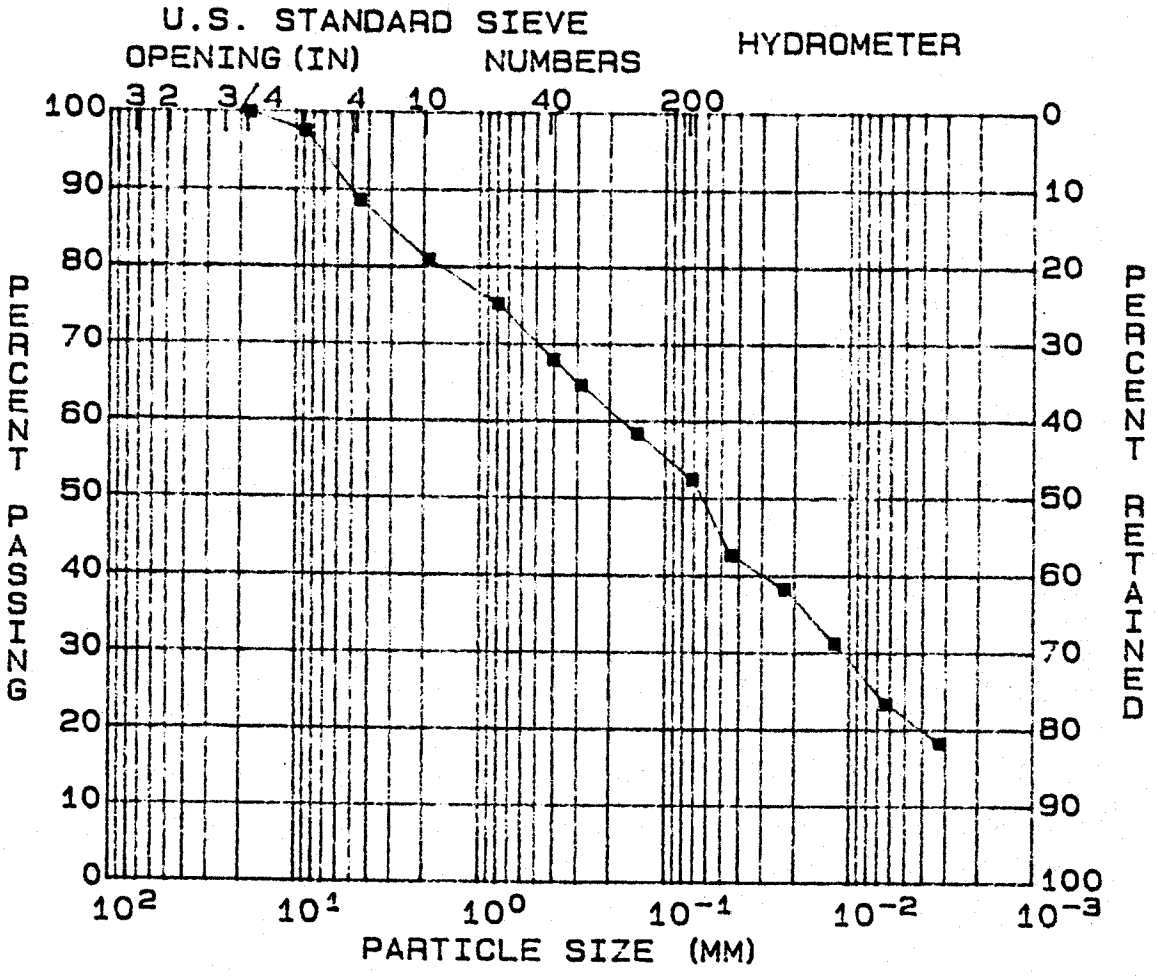
GRAVEL (%)	= 3	D10 (MM)	= --
SAND (%)	= 20	D30 (MM)	= --
SILT (%)	= 46	D60 (MM)	= --
CLAY (%)	= 31	COEF UNIF	= --
SOIL SYMBOL	= CL	L.L. (%)	= 37
MOISTURE (%)	= --	P.I. (%)	= 17
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.16
DATE : 02-26-87



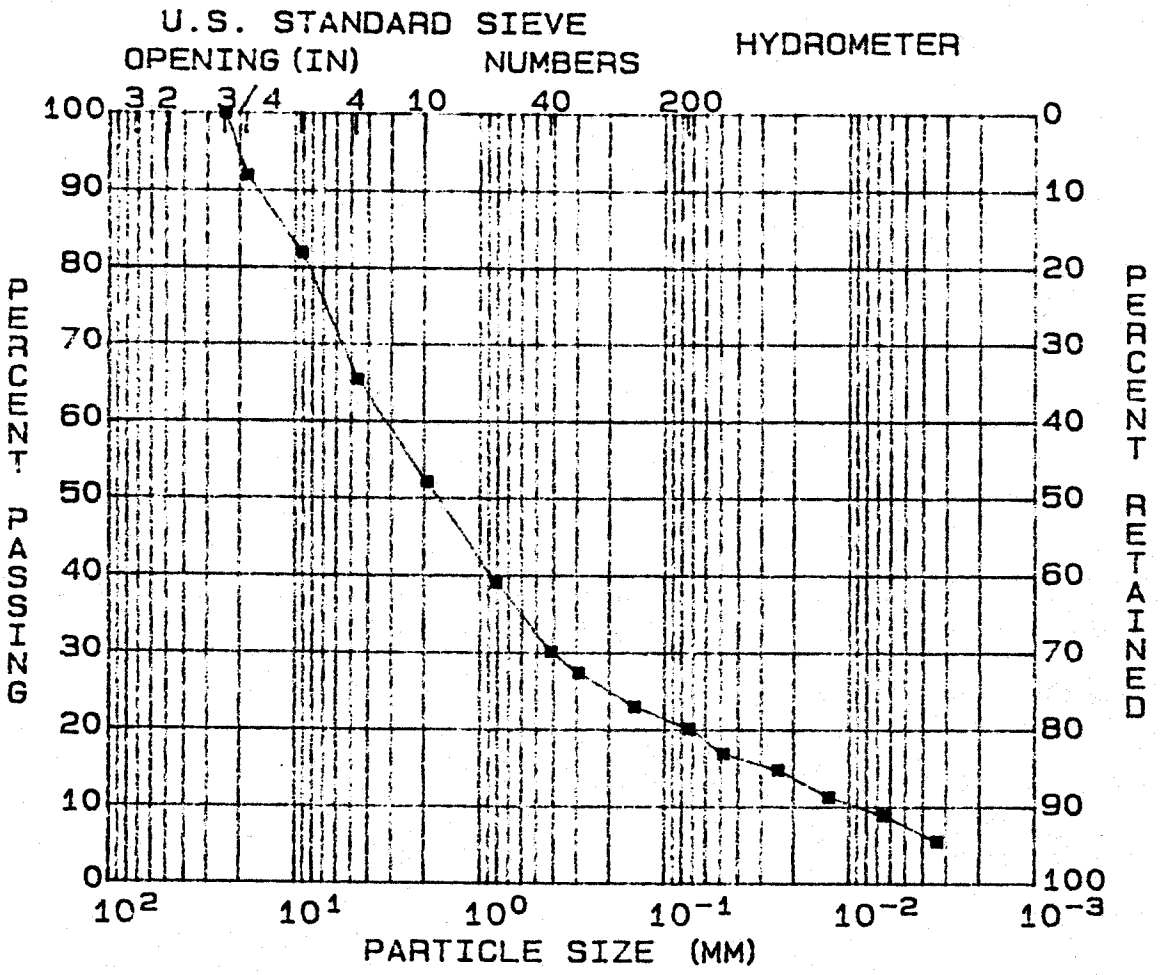
GRAVEL (%)	= 11	D10 (MM)	= --
SAND (%)	= 37	D30 (MM)	= --
SILT (%)	= 31	D60 (MM)	= --
CLAY (%)	= 21	COEF UNIF	= --
SOIL SYMBOL	= CL/ML	L.L. (%)	= 41
MOISTURE (%)	= --	P.I. (%)	= 16
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.17
DATE : 02-26-87

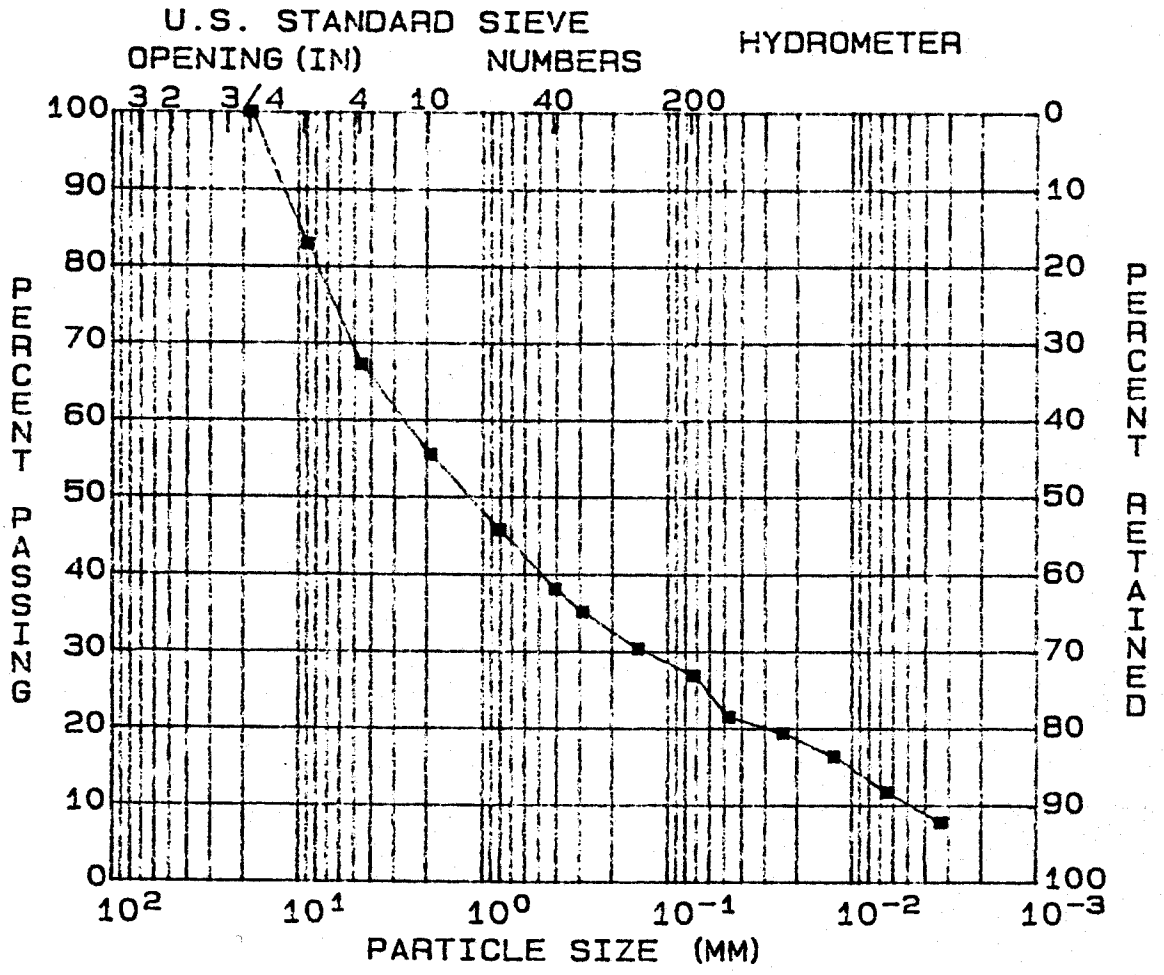


GRAVEL (%)	= 34	D10 (MM)	= 0.0088
SAND (%)	= 45	D30 (MM)	= 0.3978
SILT (%)	= 13	D60 (MM)	= 3.2283
CLAY (%)	= 8	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 36
MOISTURE (%)	= --	P.I. (%)	= 15
SP. GR.	= 2.65		

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.18
DATE : 02-26-87



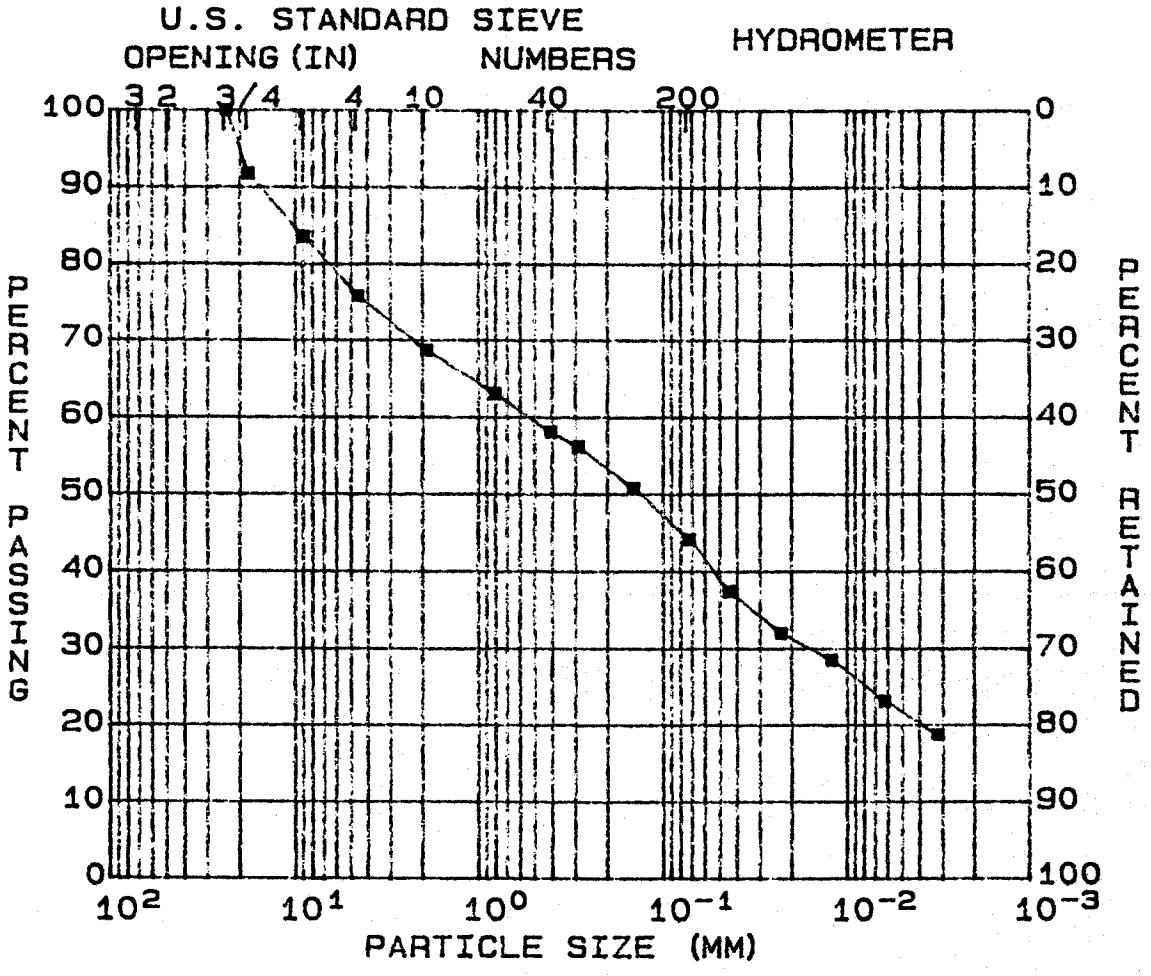
GRAVEL (%)	= 32	D10 (MM)	= 0.0047
SAND (%)	= 41	D30 (MM)	= 0.1273
SILT (%)	= 17	D60 (MM)	= 2.6486
CLAY (%)	= 10	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 30
MOISTURE (%)	= --	P.I. (%)	= 10
SP. GR.	= 2.65		

REMARKS:

TVA SINGLETON MATERIALS ENGINEERING LABORATORY
PARTICLE SIZE ANALYSIS

PROJECT: JOHN SEVIER S.P.
FEATURE: BORROW RECLAIM
STATION:
RANGE :

BORING: SS 1-35
EL. :
SAMPLE: GR.19
DATE : 02-26-87



GRAVEL (%)	= 24	D10 (MM)	= 0.0008
SAND (%)	= 32	D30 (MM)	= 0.0159
SILT (%)	= 23	D60 (MM)	= 0.5242
CLAY (%)	= 21	COEF UNIF>	100
SOIL SYMBOL	= SC	L.L. (%)	= 38
MOISTURE (%)	= --	P.I. (%)	= 17
SP. GR.	= 2.65		

REMARKS: